

Canadian Agri-Food Policy Institute (CAPI)
L'Institut canadien des politiques agro-alimentaires (ICPA)
960 Carling Avenue, CEF
Building 49, Room 318
Ottawa, Ontario
K1A 0C6

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Final Report
Consumer Attitudes on Foods and Farming

For
Canadian Agri-Food Policy Institute

Draft Discussion Document

By
Shelley Thompson
SJT Solutions
Box 310
Southey, SK
S0G 4P0
306-726-4569
sjthompson@lincsat.com

April, 2005

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PROJECT OBJECTIVES

The Canadian Agriculture Policy Institute has undertaken a large project about the farm income problem in Canada. The project will examine six dimensions of the problem including Canadian demand conditions and their linkage to farm income. CAPI will commission two papers to increase their understanding of this dimension: consumer attitudes on foods and farming, and establishment of farm prices and degree of linkage with consumer prices.

Many organizations routinely commission studies and/or surveys about consumer attitudes towards food and agriculture. **The objective of this project is to provide insights into Canadian consumer demand and their linkage to farm income by synthesizing existing consumer attitude studies.** The major questions that this project will address are as follows:

- What are the major attitudes of Canadians regarding farmers and farming?
- What are the major attitudes of Canadians regarding food and food issues such as food safety, quality, genetic modification, and willingness to pay for specific food attributes?

Through its examination of the above questions the project will be able to create insight into linkages between consumer attitudes and farm income.

Project Scope:

The scope of the project is as follows:

- This project will use existing studies and surveys on consumer attitudes towards farming and food. AAFC and CAPI related organizations (such as UPA, CCGD, and CFA) will provide access to studies and surveys completed for them. Other publicly available studies relevant to the issue should also be used.
- The studies and surveys will be reviewed and hypothesis developed for CAPI.
- A synthesis report containing the findings of the review, conclusions about the hypothesis, and linkages to farm income will be prepared.
- The researcher is to collaborate with other researchers including the Consumer Network and to work with the Project Steering Committee.

HYPOTHESIS

The following hypothesis about consumer attitudes towards farms and farming and their impact on farm income were developed.

Food safety is important to Canadian consumers and they are willing to pay more for safer food. The implementation of more or enhanced food safety programs (such as traceability) would increase the demand for food produced in Canada which would result in an increase in farm income.

The quality of food is important to Canadian consumers and they are willing to pay for high quality food. Producing higher quality food would increase the demand for Canadian food which would result in an increase in farm income.

Consumers and foodservice firms are looking for differentiated products. Filling this need would improve farm income.

Canadian consumers prefer food produced in Canada to food produced in other countries. The higher prices for Canadian food products would improve farm income.

Canadian consumers are aware of the relationship between food and health. Increased demand for functional foods would improve farm income.

Concern for the environment by Canadian consumers is growing and they would be willing to pay more for food produced in an environmentally sustainable fashion.

Agriculture is important to Canadians and they are willing to see farm incomes subsidized.

REVIEW OF EXISTING STUDIES

This project reviewed five studies on consumer attitudes towards farms and farming received from organizations related to CAPI. The studies are summarized below.

Studies from CAPI Organizations Reviewed			
Study	Date	Organization	Focus
Consumer Perceptions of Food Safety and Quality	November 2004	Ipos Reid for AAFC	Market research on consumer attitudes, perceptions and behaviour regarding Canadian food safety and quality To be used in policy development
Canadian Public Opinion on Agricultural Issues – A Review	December 2002	National Public Relations for Canadian Federation of Agriculture	Summarizes market research on consumer knowledge, attitudes and behavior towards Canadian agri-food
Functional Foods and Nutraceuticals	May 2004	Environics Research Group for AAFC	Market research on health professionals awareness, attitudes, knowledge and information sources about functional foods and nutraceuticals
Demand for Food Products Supporting Health and Wellness	June 2004	Decima Research for AAFC	Market research on consumer awareness about disease and food, information needs, attitudes towards functional foods and identify which foods consumers consider most important
2003 Farm Financial Survey		Statistics Canada	Survey of Canadian producers that focuses on their financial situation. Also asked producers questions regarding food safety

The project also reviewed an additional 11 studies in order to gain more insights into consumer attitudes towards farms and farming. The studies are summarized in the following table.

Other Studies Reviewed			
Study	Date	Organization	Focus
Integrating Food Policy with Growing Health and Wellness Concerns: An Analytical Literature Review of the Issues Affecting Government, Industry, and Civil Society	December 2004	S Cash, B Cortus, E Goddard, A Han, M Lerohl and J Lomeli (part of AAFC Consumer & Market Demand Research Policy Network) for AAFC, Food Value Chain Bureau	Overview of literature and relationship between disease and food consumption, views of international food agencies regarding food health issues, the response by NA food industry and public policy issues
Consumers and Supply Chains – 2002 Food Issues Monitor	June 2003	L Hetherington, Environics International, Presentation at IAMA Forum & Symposium	International comparisons of consumer attitudes towards food, food safety and food quality
Consumers' Willingness to Pay for Climate Change	April 2004	The Summerhill Group for the Consumers Council of Canada	Market research on Canadian consumers' willingness to pay for climate change
Grocery and Food Service Trends Forum Report	May 2004	Sponsored by National Farm Products Council	Presentations on consumer attitudes, grocery and food service trends, and value chains
Agricultural Product Differentiation Industry Perspective	November 2004	C Gallagher, Bank of America at a Farm Foundation Seminar	Presentation on emerging issues and trends, the impact on the agri-food system and opportunities
Mad Cows and Bt Potatoes: Global Public Goods in the Food System	2004	L Unnevehr, Presidential Address at AAEA Annual Meeting, AJAE, Volume 86, #5, 2004	Discussion of global public goods and two that occur in agriculture: food safety and innovation
Traceability in the Canadian Red Meat Sector: Do Consumers Care?	2005	J Hobbs, D Bailey, D Dickinson and M Haghiri, CJAE, Volume 53, # 1, March 2005	Uses experimental auctions to measure the willingness to pay by Canadian consumers for assurances of food safety, traceability, and farm production method for beef and pork
Functional Foods: Consumer Issues and Future Challenges	2004	K Singletary and M Morganosky, Journal of Food Distribution Research, Volume 35, # 1, March 2004	Examines challenges for the growth of the functional food market
The Globalization of Food and How Americans Feel About It: Results of Two Surveys	2004	B Vander Mey, Journal of Food Distribution Research, Volume 35, # 1, March 2004	Market research on US consumer attitudes towards food production, processing, food security and information sources in 2000 and 2001
The New Food Economy: Consumers, Farms, Pharms, and Science	2001	J Kinsey, Presidential Address at AAEA Annual Meeting, AJAE, Volume 83, # 5, 2001	Discusses the new food economy and how it should be characterized as a web rather than a chain
In-store Evaluation of Consumer Willingness to Pay for "Farm-Raised" Pre-Cooked Roast Beef: A Case Study	2004	L Nalley, D Hudson, R Rogers, J Marting and J Herring, in Journal of Agribusiness, Volume 22, # 2, Fall 2004	Estimates the willingness to pay for a differentiated product

HYPOTHESIS TESTING

This project used the studies reviewed to test the following seven hypotheses:

Food safety is important to Canadian consumers and they are willing to pay more for safer food. The implementation of more or enhanced food safety programs (such as traceability) would increase the demand for food produced in Canada which would result in an increase in farm income.

The quality of food is important to Canadian consumers and they are willing to pay for high quality food. Producing higher quality food would increase the demand for Canadian food which would result in an increase in farm income.

Consumers and foodservice firms are looking for differentiated products. Filling this need would improve farm income.

Canadian consumers prefer food produced in Canada to food produced in other countries. The higher prices for Canadian food products would improve farm income.

Canadian consumers are aware of the relationship between food and health. Increased demand for functional foods would improve farm income.

Concern for the environment by Canadian consumers is growing and they would be willing to pay more for food produced in an environmentally sustainable fashion.

Agriculture is important to Canadians and they are willing to see farm incomes subsidized.

Food Safety

Food safety is important to Canadian consumers and they are willing to pay more for safer food. The implementation of more or enhanced food safety programs (such as traceability) would increase the demand for food produced in Canada which would result in an increase in farm income.

Evidence

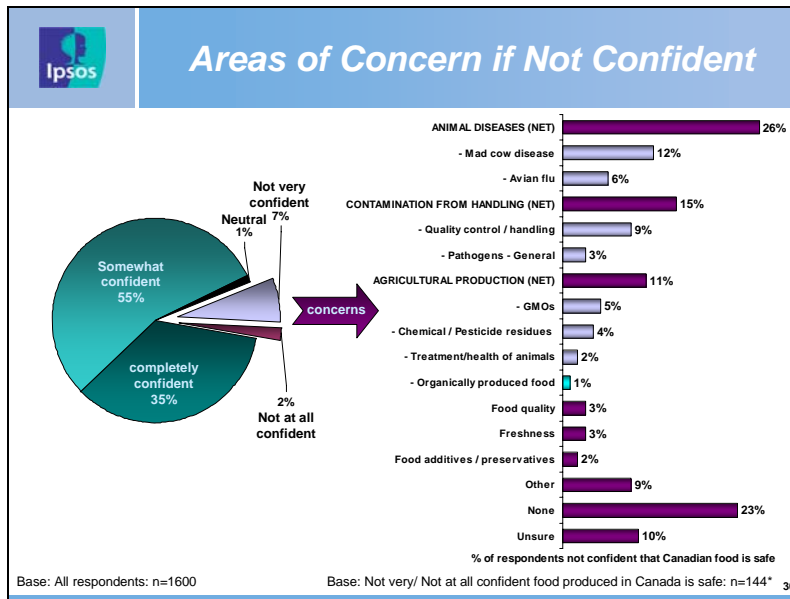
Food safety is important to Canadian consumers. However, consumers are not 100% confident about the safety of the food they eat.

According to an Ipos Reid survey done for AAFC during April, 2004, Canadian consumers are confident that food produced in Canada is safe, with 35% being completely confident and 55% somewhat confident.¹ (charts taken directly from the Ipos Reid presentation)

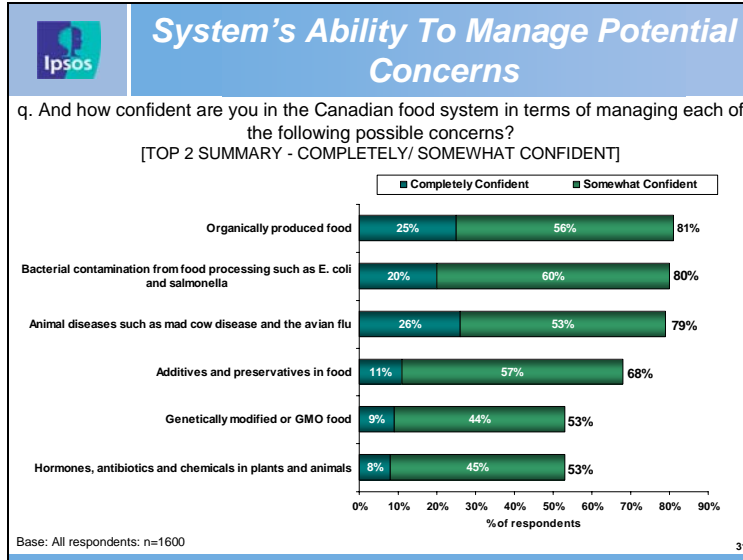
¹ AAFC commissioned Ipos Reid to conduct market research on consumer attitudes, perceptions and behaviour regarding Canadian food safety and quality. A telephone survey of 1600 Canadian consumers was done during April 2004.



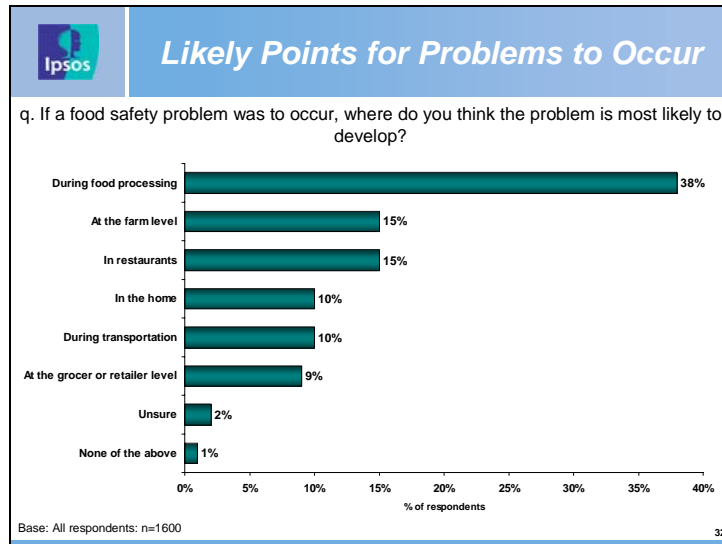
For those consumers with concerns, the primary concern was animal disease. Contamination from handling was mentioned by 15% while agricultural production was mentioned by 11%. (Ipsos Reid)



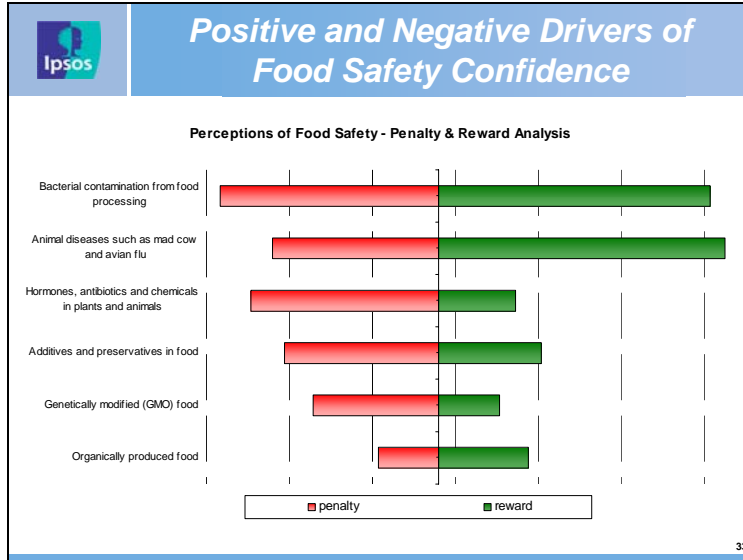
Consumers are confident in the Canadian system's ability to manage concerns associated with organic food, bacterial contamination and animal diseases but less confident about the handling of concerns related to GMOs and substance used in animal or plant production. (Ipsos Reid)



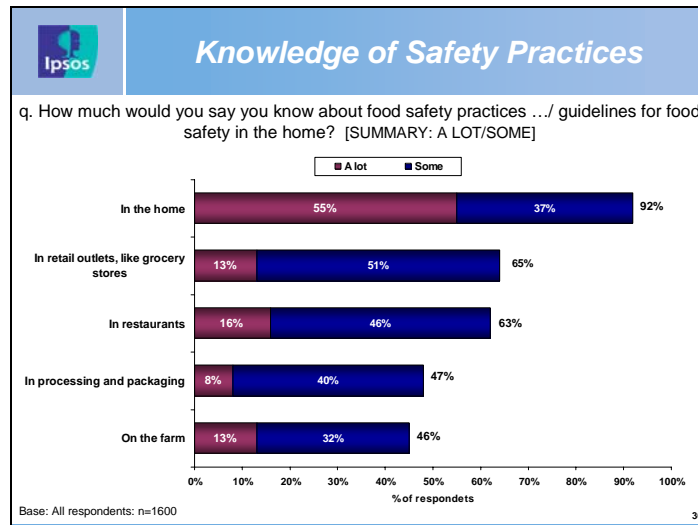
Canadians are most likely to believe that a food safety problem will occur during food processing. Few Canadians believe that the food safety problem will occur on the farm, the restaurant or in the home. (Ipsos Reid)



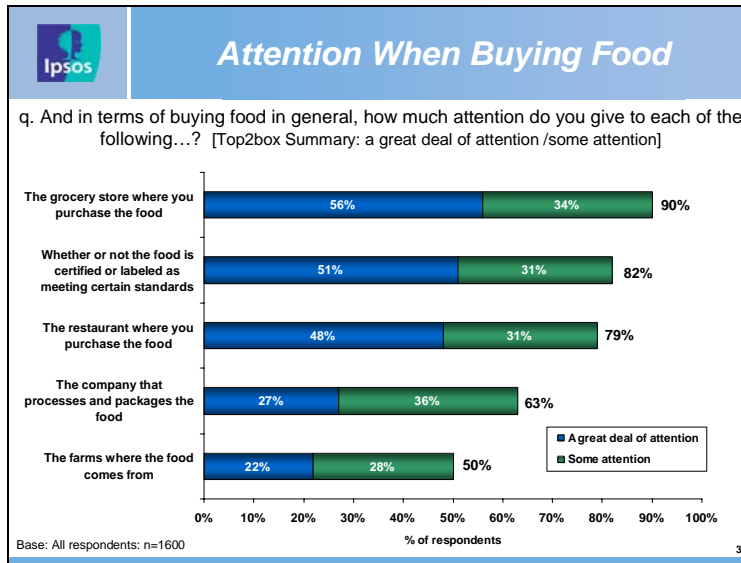
Consumer confidence in food safety is primarily influenced by the ability to manage bacterial contamination during processing. The ability to manage animal diseases also improves consumer confidence in food safety. (Ipsos Reid)



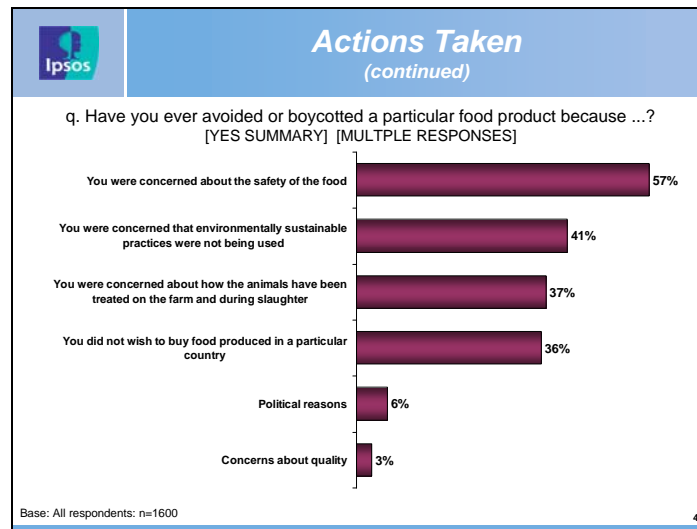
While consumers are confident about food safety practices in the home they are less familiar with food safety practices in grocery stores and restaurants and even less knowledgeable about food safety practices used in processing and on the farm. The lack of knowledge about on farm food safety practices is not surprising given that 55% of consumers had not been on a farm in the last two years. (Ipos Reid)



Consumers do not pay much attention to the farm where the food comes from. More attention is paid to grocery stores, restaurants and labeling or certification. (Ipos Reid)



Over one half of Canadians have boycotted food products they felt were unsafe. Consumers also boycotted foods because of concern about the environmental sustainability of production, animal welfare concerns and because they were produced in a particular country. (Ipsos Reid)



The analysis of survey results done by National Public Relations for the Canadian Federation of Agriculture (CFA) found that Canadians are **quite confident that food in Canada is safe** (studies by Ipsos Reid and Compas). However, consumers are **becoming more aware of food safety issues**. In 2001, 50% of Canadians had concerns about food safety, particularly for beef (RMG). A study by Compas in 2002 found that safe food handling was the highest food safety concern followed by cleanliness and the proper storage of foods. One study by RMG found that even though concern about food safety had risen, few Canadians planned to act on their concern by avoiding or reducing consumption or seeking more information. ¹

A 2002 survey of 11 countries (1,000 consumers in each country) found the following: (Hetherington):

- Across the countries, freshness (27%) and nutrition (25%) are the most important factors in choosing food. Only 16% viewed safety as the most important factor.
- Across the countries, 47% said that food safety was the food issue concerning them the most.
- Almost half (47%) of the consumers surveyed viewed the safety of food from another country as a serious concern. In Canada, 42% of respondents were very concerned about the safety of foods from another country while 36% were somewhat concerned.

This research also suggested that people **treat the food system as a whole** when thinking about responsibility for food safety which implies that the performance of one member of a supply chain will impact the perception of other members of the supply chain.

According to Allan Greg of The Strategic Council, Canadians are experiencing a joyless prosperity because of concerns such as terrorism and political instability. **About 65% of consumers in Canada are concerned about food safety. Food has become “scary”.** Consumers expect the food industry to respond quickly to health concerns. The food industry must advocate for health and the healthy use of products. (Grocery and Food Service Trends Forum)

The **importance of food safety** has also been flagged by Nick Jennery (Canadian Council of Grocery Distributors). Consumers are serious about food safety and punish marketers that don't provide them with adequate product information. (Grocery and Food Service Trends Forum)

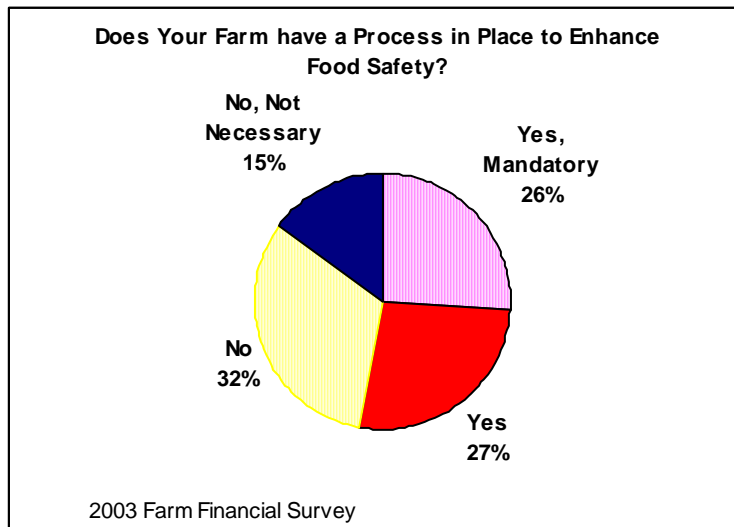
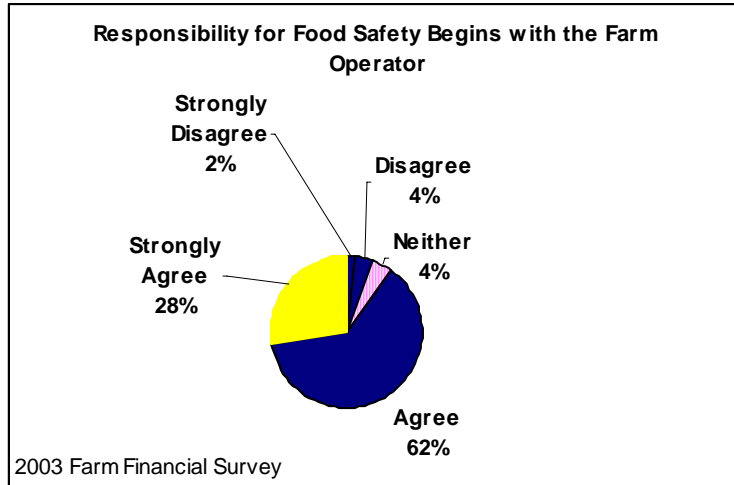
According to Craig Watson (SYSCO), **food safety is the major issue in the food service sector.** All participants require additional and more effective information about healthy foods. Traceability is very important to the sector's actions to protect consumer/customer welfare. (Grocery and Food Service Trends Forum)

Food safety is also an important issue in the US. According to Gallagher of the Bank of America, food safety and concerns about terrorism and the food supply are two of the trends impacting the US food and agriculture sector. “Producers find themselves in an ever-tightening vice” which has placed producers under greater scrutiny and they are being required to adopt track and trace practices. The increased level of regulation is reducing their international competitiveness. “Vulnerabilities to terrorism add a new wrinkle of insecurity and are redefining “routine” agricultural practices”. Gallagher argues that because of this the Department of Homeland Security will have a larger role in agricultural regulation.

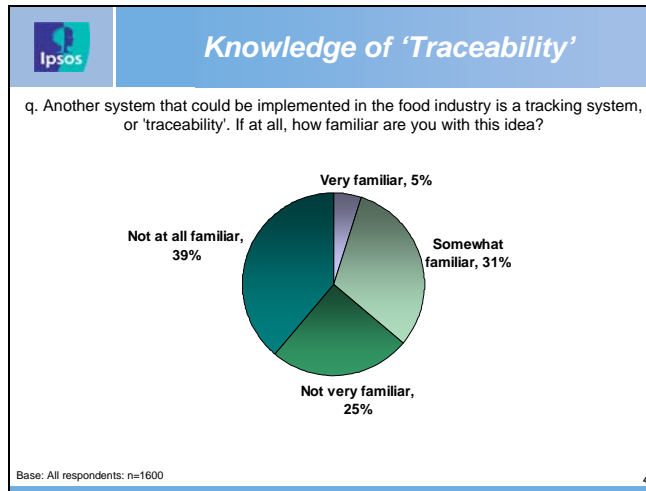
The demand for food safety has increased. Technological change has improved detection. Because of changes in food production, distribution and consumption, **the responsibility for food safety has shifted from the consumer.** Large scale processing operations have increased the distance a food hazard can be spread. The

growth in foodservice has shifted responsibility for food safety from consumers to prior parts of the food chain. (Unnevehr)

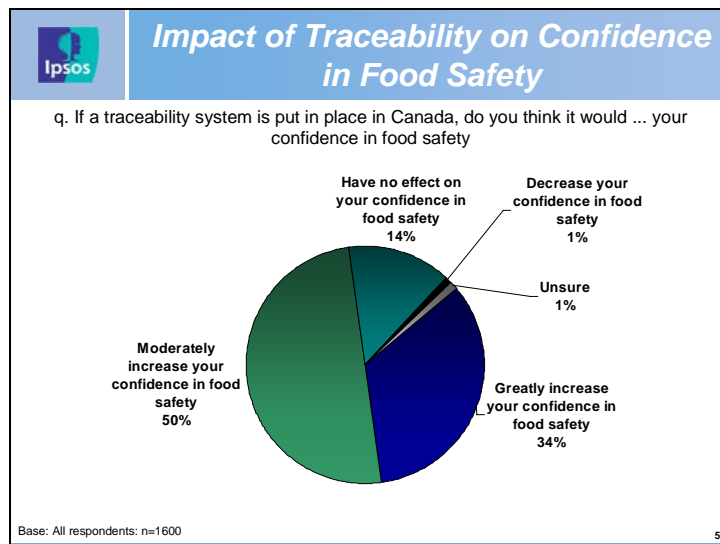
Canadian agricultural producers believe that they have an important role to play in food safety. The 2003 Farm Financial Survey by Statistics Canada asked two questions about food safety. These were as follows:



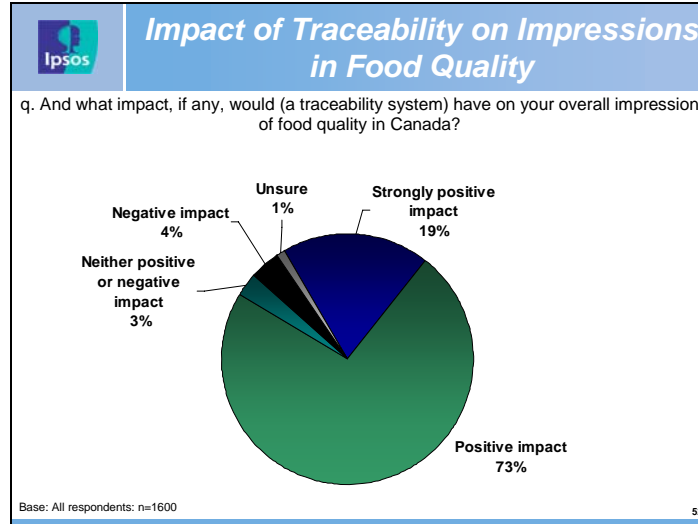
Traceability is a significant issue to Canada’s agri-food industry. Consumer awareness, however, is low. According to an Ipos Reid survey in April 2004, when consumers were asked about their knowledge of a traceability system (defined as “a system that would enable Canada to trace or track food from the farm where it was produced, through processing and distribution to retail outlets where consumers like you buy it”), few reported familiarity with the concept.



Having a food traceability system in Canada would increase consumers' confidence in food safety. (Ipos Reid)



Having a food traceability system would also have a positive influence on consumers' impressions of food quality. (Ipos Reid)

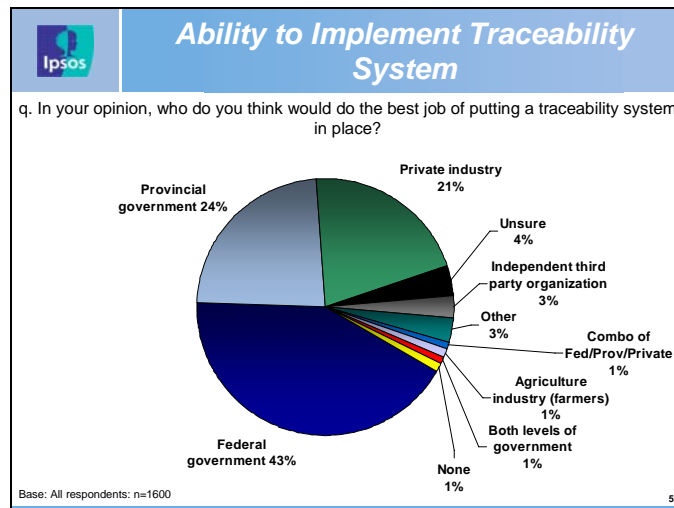


The importance of traceability varies across consumers. Consumers were segmented into five groups in Ipsos Reid’s analysis. Conscientious consumers were the largest group (32%) and are very satisfied with the quality of food produced in Canada. The group is also confident about the safety of food produced in Canada. The impact on this group of the establishment of a traceability system would be second largest among consumer segments. The busy family shoppers, the next largest segment at 29%, are confident in the safety of food and have the highest impressions of the quality of food produced in Canada. Uninvolved trusters comprise 14% of the sample. This segment is detached from food safety and quality issues, simply trusting that the food is safe and of high quality. Social activists comprise 16% of the sample. This group has the lowest level of confidence in food safety and the lowest impressions of food quality. The final segment, informed action takers, represents 9% of consumers. The group has the highest knowledge level about food safety standards. A traceability system would have the largest positive impact on this group.

Major Defining Characteristics Differentiating Between Segments

Segment Characteristics Related to Food Issues					
	Conscientious Consumers	Busy Family Shoppers	Uninvolved Trusters	Social Activists	Informed Action Takers
Segment Size (% of Consumers)	32%	29%	14%	16%	9%
Impressions of quality	High	Highest	High	Lowest	High
Confidence in safety	High	High	Highest	Lowest	High
Knowledge of standards	High	Medium	Minimal	Medium	Highest
Information gathering	Medium	Minimal	Minimal	Selective	Highest
Issues of concern	Diverse	Nutrition	Price	Nutrition Ingredients	Production Processing
Degree of activism	Low	None	None	High	Highest

Most Canadians believe that governments would be the most able to implement a traceability system. (Ipos Reid)



The Ipos Reid study for AAFC concluded that consumers may be willing to pay for a system that guarantees the safety of food.

A recent Canadian study by Hobbs et al examined the willingness to pay for a traceability system. Traceability was defined as “the ability to follow the movement of food through specified stage of production, processing, and distribution”. If there is a price premium for safer food than firms with better safety have an incentive to label their product as being safer and this requires certification, third party audits etc to convey traceability information along the supply chain. Market failure (which can occur because of credence issues) can result in firms providing less than the socially optimal amount of traceability. In this case, a mandatory traceability system might provide the socially optimal level of traceability. Traceability systems reduce the cost of dealing with a food safety lapse; decrease information costs for consumers; and make Tort Liability Law a more effective incentive for firms to produce safe food.

The study used experimental auctions to measure the willingness to pay by Canadian consumers for assurances of food safety, traceability, and farm production method for beef and pork. The study results were as follows:

- Consumers were willing to pay non-trivial amounts for traceability assurance – stronger for beef than pork
- Food safety assurances and farm production assurances for beef were more valuable to consumers than only a traceability scheme

The study concluded that while traceability is valuable to consumers it doesn't provide a solution for consumer's lack of information about quality characteristics. It is a necessary but not sufficient condition for the ex ante verification of quality characteristics.

Food is both exported and imported in Canada's agri-food system. Because of trade, Unnevehr views food safety as a **global public good**. Global public goods are “a

benefit providing utility that is, in principle, available on an international scale". Global public goods, which are inputs to final public goods, include property rights, safety, nomenclature and predictability. They arise when positive or negative externalities cross borders and are non-rival in consumption and non-excludable. Food safety is a public good for the following reasons:

- Individual producers are not able to adequately control an externality (food safety hazard) without collaboration.
- The public sector may have to enforce standards and certify sanitary conditions (non-excludability).
- Because of information asymmetry consumers may not be able to judge food safety or avoid hazards. Minimum standards may be necessary to protect certain groups in society.

Viewing food safety as a global public good suggests that Canadian consumers would be unwilling to pay for an enhanced food safety system that benefits consumers in other countries.

Assessment of Evidence

Food Safety Hypothesis: *Food safety is important to Canadian consumers and they are willing to pay more for safer food. The implementation of more or enhanced food safety programs (such as traceability) would increase the demand for food produced in Canada which would result in an increase in farm income.*

Would consumers be willing to pay for enhanced food safety systems?

- The Ipsos Reid study for AAFC concluded that consumers may be willing to pay for a system that guarantees the safety of food. It is important to remember, however, that not all consumers would be willing to pay for a food safety system.
- The work by Hobbs et al suggests that consumers would pay for a traceability system, especially for beef. However, because traceability was found to be a necessary but not sufficient condition to provide consumers with information about quality, such a system should be augmented with food safety assurance and farm production assurance.
- People treat the food system as a whole when thinking about food safety (Hetherington). This would seem to imply that consumers would be unwilling to pay extra to improve food safety at one particular part of the value chain such as the farm.
- Viewing food safety as a global public good suggests that Canadian consumers would be unwilling to pay for an enhanced food safety system that benefits consumers in other countries

Overall, the evidence suggests that we should reject the food safety hypothesis.

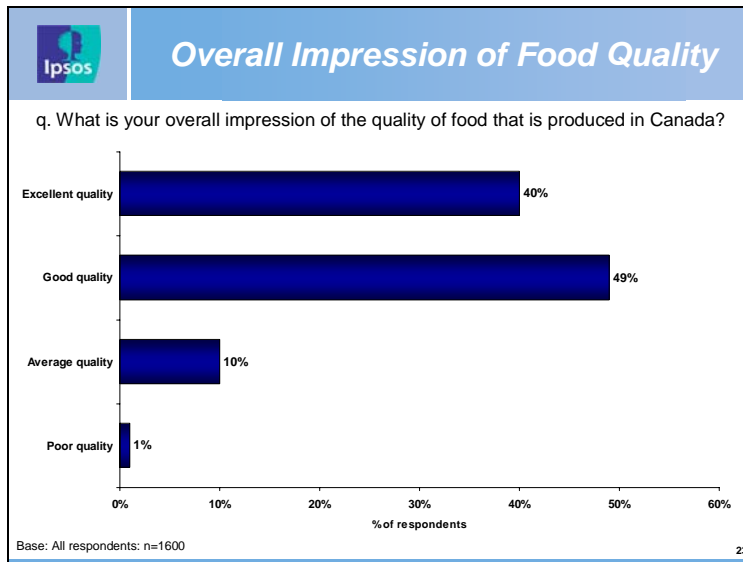
Food Quality

The quality of food is important to Canadian consumers and they are willing to pay for high quality food. Producing higher quality food would increase the demand for Canadian food which would result in an increase in farm income.

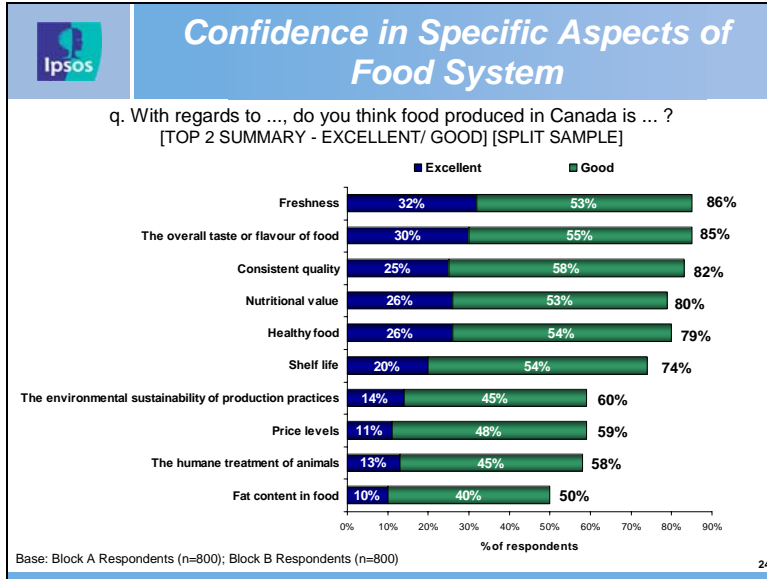
Evidence

The work done for the CFA also examined food quality. In 2000, about 75% of Canadians believed that the quality of food in Canada was high. (Ipos Reid).

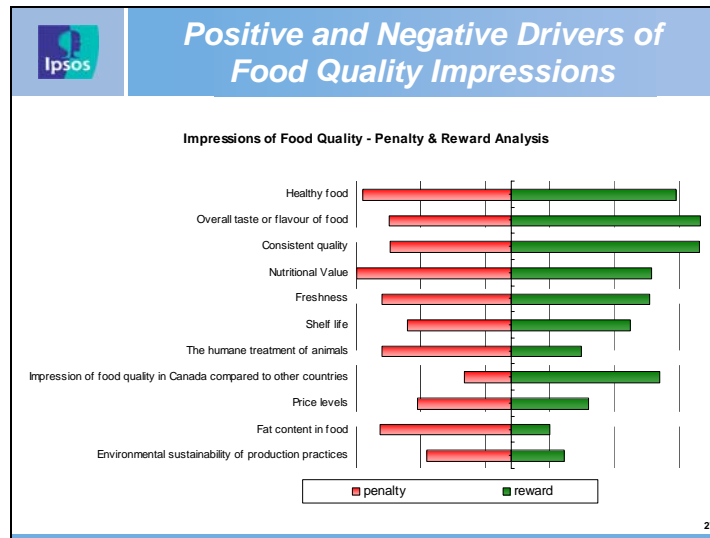
Ipos Reid, in a 2004 survey for AAFC, found that Canadians believe that their food is of high quality.



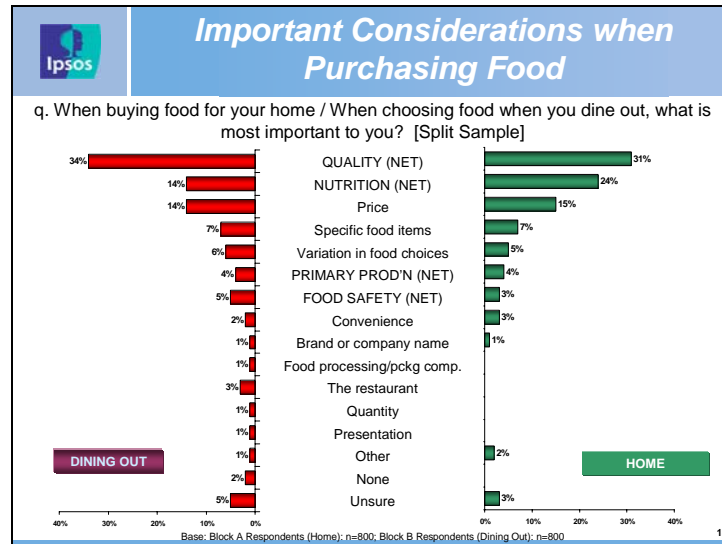
Consumers are confident that their food is fresh, tasty, of consistent quality and is nutritional. (Ipos Reid)



Consumers’ perceptions of food quality are driven by healthiness. If healthiness is present the food is rewarded strongly. If absent, the impression of food quality is penalized. The attributes of nutritional value, healthiness, freshness, humane treatment of animals and fat content have stiff penalties associated with them. If the food does not meet the consumer’s expectations, the perception of the overall quality of Canadian food will fall.



Quality is the most important consideration when purchasing food for your home or when eating out. Nutrition is a more important consideration when purchasing food for the home. Price is the third highest consideration.



Food quality means different things to different consumers, although freshness seems to be the most important attribute followed by nutrition and food safety. **The relative unimportance of price implies that consumers expect food to be priced in a way that supports the attributes associated with food quality. Ipsos Reid also concluded that consumers might be willing to pay for higher quality food.**

Nick Jennery believes that **pricing is and will remain a key factor in consumer decisions.** (Grocery and Food Service Trends Forum)

Assessment of Evidence

Food Quality Hypothesis: *The quality of food is important to Canadian consumers and they are willing to pay for high quality food. Producing higher quality food would increase the demand for Canadian food which would result in an increase in farm income.*

Will consumers pay for higher quality food?

- The 2004 Ipsos Reid survey concluded that consumers may be willing to pay for higher quality food.
- Based on his industry experience, Nick Jennery argues that price is the most important factor in consumer choice – consumers will not pay for enhanced food quality.

Based on this evidence, the food quality hypothesis can not be accepted.

Differentiated Products

Consumers and foodservice firms are looking for differentiated products. Filling this need would improve farm income.

Evidence

Nick Jennery suggested the following trends were affecting the grocery sector: (Grocery and Food Service Trends Forum)

- The grocery industry is very competitive because of the entry of large retailers like Wal-Mart and Costco. Operating margins are below 1980 levels. This is one reason why grocers are continually looking for new and interesting products to tempt consumers.
- Consumers are willing to pay a premium for value-added products. Innovation is important to consumers. *“Show me something different: I don’t know what to have for dinner tonight, I’ve got eight people coming over on Saturday, and I can’t cook, so help me with this one.”*

Craig Watson believes that differentiated products are important to the food service sector. Product innovation is important. *“Restaurateurs are looking for unique value-added niche products to present as exciting menu alternatives to their customers. The restaurateur prefers to present their products as uniquely prepared and locally produced.”* (Grocery and Food Service Trends Forum)

Gallagher believes that changes in demographics and the growing affluence of consumers are creating **demands for new food products** and that the growth in the food service sector requires new products.

According to Kinsey, consumers want more differentiated food products. As well, the preparation and cooking of food is occurring further back in the supply chain rather than in the consumer’s kitchen. These changes are occurring because of increases in income and relatively high income elasticity for food quality and food safety.

Consumers are demanding more differentiated and convenient food products. Some consumers also demand specific quality characteristics such as farm-raised and organic. Some producers are attempting to respond to these consumer demands by shifting from a high volume and low margin commodity approach to delivering higher-valued differentiated products. **A recent study by Nalley et al examined the willingness to pay for farm-raised pre-cooked roast beef.** It found a small but statistically significant willingness to pay premium for the product. The study did not examine the profitability of the product.

Assessment of Evidence

Consumers and foodservice firms are looking for differentiated products. Filling this need would improve farm income.

Do consumers want differentiated products?

-
- Grocery stores actively search for new and innovative products in order to improve margins.
 - The food service sector requires new products to provide consumers greater choice.
 - Consumers desire new and differentiated products because of their growing affluence and changes in demographic structure.
 - There is some evidence that consumers are willing to pay for value-added differentiated products.

The evidence suggests that we should accept the hypothesis that consumers and food service firms are looking for differentiated products. However, the impact on farm income is likely to be small. Much of the value of differentiated products is captured by the processing and retailing sectors and not the producer unless the producer is actively involved in these activities. The demand for differentiated products could create many small but profitable niche markets. These markets could improve farm income for some producers.

Canadian Food Products

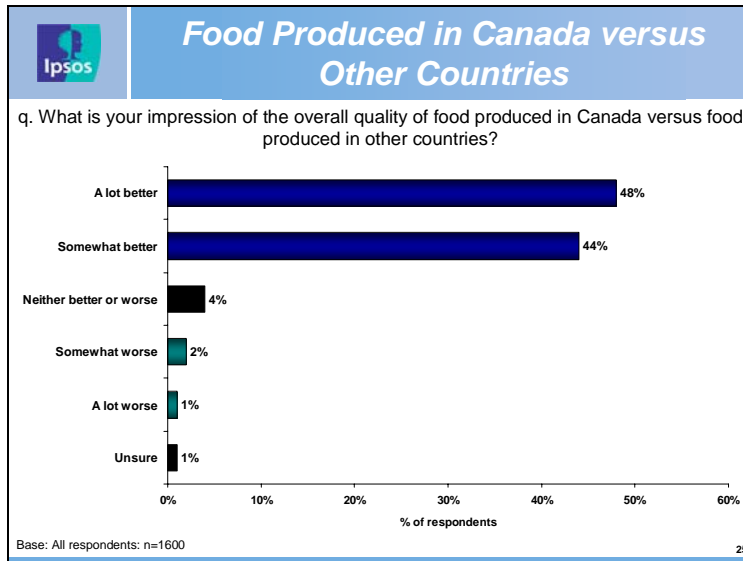
Canadian consumers prefer food produced in Canada to food produced in other countries. The higher prices for Canadian food products would improve farm income.

Evidence

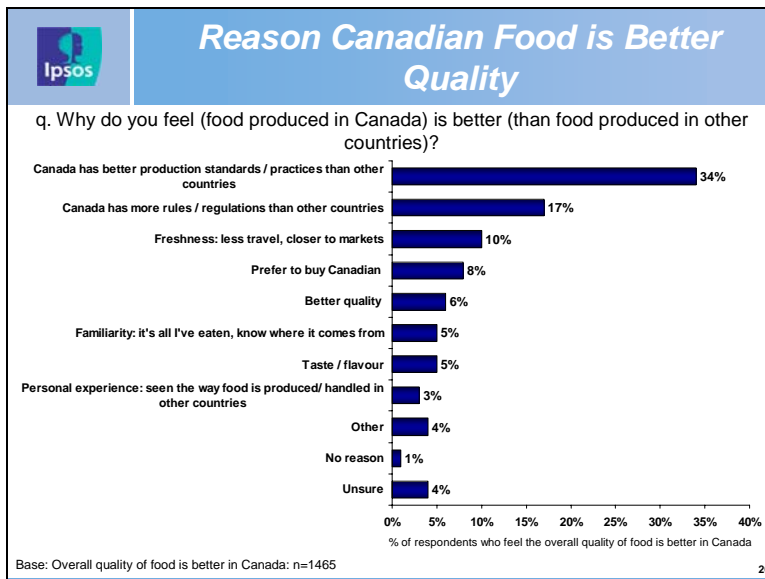
A compilation of survey results for the CFA found that:

- A 2002 survey by Compas found that Canadians buy Canadian products to benefit the economy and because it is fresher and of higher quality.
- Canadians believed that the government should encourage the consumption of Canadian produced food (Ipos Reid).
- However, their choice of Canadian or foreign produced food is sensitive to price and consumers will use imported foods if they cost significantly less (Research Spectrum).

A 2004 Ipos Reid survey conducted for AAFC found that Canadian consumers believe that food produced in Canada is of higher quality than food produced elsewhere.



Canadians believe that Canadian food is of higher quality because Canada has better production standards or practices than other countries. The next highest factor mentioned was that Canada has more rules and regulations. (Ipsos Reid)



The finding that consumers believe that food from their country is safer than food from other countries appears to be widespread among countries. In 2002, almost half (47%) of the consumers surveyed in 11 countries viewed the safety of food from another country as a serious concern. In Canada, 42% of respondents were very concerned about the safety of foods from another country while 36% were somewhat concerned. (Hetherington)

According to Jennery, **Canadian grocers like locally produced perishables.** *“Canadian-made, and local, resonates really well when you merchandise perishable products, pretty much across the country. The stores readily market regional products.*

Retailers absolutely want to work with the family farms, with the regional suppliers. It just makes good business sense, and it resonates well with consumers.” (Grocery and Food Service Trends Forum)

In the food service sector, product innovation is important. *“Restaurateurs are looking for unique value-added niche products to present as exciting menu alternatives to their customers. The **restaurateur prefers to present their products as uniquely prepared and locally produced.**”* (Craig Watson, Grocery and Food Service Trends Forum)

There is also evidence that US consumers prefer locally produced foods. A study which presented market research on US consumer attitudes towards food production, processing, food security and information sources in 2000 and 2000 found that: (Vander Mey)

- There is a preference for locally grown foods – “prefer US grown and processed foods and foodstuffs.”
- Consumers perceive the safety of fruits and vegetables as being higher than the safety of meat. This holds regardless of where the fruits and vegetables are grown.
- Consumers’ food safety concerns are greater for foods produced and processed outside the US than for US produced and processed foods.

Assessment of Evidence

Canadian consumers prefer food produced in Canada to food produced in other countries. The higher prices for Canadian food products would improve farm income.

Are consumers willing to pay more for locally produced food?

- A 2002 survey by Compas found that Canadians buy Canadian products to benefit the economy and because it is fresher and of higher quality. A 2004 survey by Ipsos Reid found that Canadians believe that food produced in Canada is of higher quality than food produced elsewhere.
- Jennery and Watson suggest that locally produced food is important in the grocery and food service sectors. The food service sector likes to be able to offer customers unique value added products made with locally grown food.
- The choice of Canadian or foreign produced food is sensitive to price and consumers will use imported foods if they cost significantly less (Research Spectrum).

Based on the evidence we can accept the hypothesis that Canadians prefer food produced in Canada. However, price is important and locally produced food is likely to remain a niche product. The impact on aggregate farm income of Canadian produced food will be small.

Functional Food

Canadian consumers are aware of the relationship between food and health. Increased demand for functional foods would improve farm income.

Evidence

Interest in functional foods is growing because of **heightened awareness of the relationship between food and health**. “Over 60 percent of the risk for chronic diseases such as heart disease, stroke, colon cancer and type II diabetes is potentially preventable by life-style modifications including changes in diet.” (Singletary and Morganosky)

Dietary choices have significant economic costs in Canada. In 1993 the cost of coronary heart disease, cancer, stroke and diabetes which are diet related diseases was \$29.4 B (in 2004 dollars). Fruit and vegetable consumption may help protect against coronary heart disease, stroke and cancer. The consumption of meat, however, could be correlated with many cancers. The consumption of whole grains may help protect against coronary heart disease, cancer, stroke and diabetes. Alcohol consumed in moderation could help prevent coronary heart disease, diabetes, and strong but increase the risk of some types of cancer. (Cash et al)

An international survey found that most consumers believe that **their country will have a health crisis unless eating habits improve**. In Canada, 53% strongly agreed and 33% somewhat agreed that Canada would have a health care crisis if eating habits did not change. (Hetherington)

International agencies are working on food and health issues. The World Health Organization (WHO) has made specific recommendations about diet and physical activity in an effort to prevent non-communicable diseases. It has also made suggestions about how governments can help their citizens achieve better health through diet and exercise. Some of these suggestions are 1) ensure food and agricultural policy encourage healthy eating; 2) develop strategies to deal with how food is marketed to children; 3) create labels that effectively communicate to consumers; 4) monitor health claims; 5) provide market incentives for the development and marketing of healthy foods; and 6) use price policies to encourage healthy eating and physical activity. (Cash et al)

Canadian Non-Governmental Organizations (NGOs) do not appear to believe that the food industry should lead the effort to control obesity in Canada. A much larger percentage viewed the government as the appropriate leader. However, the NGOs do believe that the food industry has an important role to play.

The food industry is critical in modifying consumer behaviour by advertising and marketing. The food industry in Canada has responded to consumers' demand for more nutritious food. For example, foodservice companies may provide better nutritional choices along side traditional choices. Some have removed trans-fats from their products and others have added cholesterol reducing agents to their products. The industry has also introduced new products developed to meet specific health concerns. Other reasons than changing consumer demand may result in the food industry

developing more nutritious products. For example, the firms could be concerned about potential lawsuits and regulations. (Cash et al)

It is difficult to determine the impact of policies on dietary choice. Historically, policies that probably affect food consumption and diet have been made in a piecemeal fashion and by several agencies. Policy making must be better coordinated across jurisdictions. An assessment of the impact of Canadian agricultural policies on diet (not provided in the paper) suggests that they have both positive and negative impacts. Dietary choices are also influenced by trade policy and environmental policy. (Cash et al)

The presence of imperfect information about food and health (market failure) implies that there is a role for government to provide health information. Governments could also require expanded nutritional labeling requirements. Increasing the availability of accurate health information by health claims can be difficult because their value can be undermined by manipulative marketing. (Cash et al)

An international survey found that opinion varied widely across the countries about whether unhealthy foods should be taxed. In Canada, 23% strongly agreed while 22% somewhat agreed that unhealthy foods should be taxed. In the US on the other hand, only 13% either strongly or somewhat agreed. (Hetherington)

Gallagher suggests that one of the imperatives for the US agri-food system is promoting the health benefits of agricultural products. The growing awareness of the implications of obesity has resulted in food now being viewed as bad rather than healthful. Advances in science may eventually allow nutrition to be personalized (i.e. based on genetic makeup).

Analysis done for the CFA reported that Canadians are conscious of the relationship between health and food. A study by Research Spectrum reported that over 67% of Canadians were attempting to balance their diets and that many were trying to lower cholesterol levels and reduce sodium consumption. Another study by Compass found that Canadians have reduced their consumption of foods like processed products and non-poultry meat to reduce their consumption of fat, calories and other additives.

Decima Research surveyed 2,012 Canadian adults in 2004 on behalf of AAFC. **The research examined consumer awareness about disease and food, information needs, attitudes towards functional foods, and identified which foods consumers consider most important.** Highlights of the research were as follows:

- Health Profile: 72% of Canadians believe that their health is good or very good. 62% believe they have control over their health but do report being somewhat concerned about general well being, eye health, cancer, heart health and obesity.
- Dietary Choices: 77% of Canadians believe that food/nutrition are important in maintaining health while 73% report that exercise is important in maintaining health. Almost 80% of Canadians believe that food and nutrition positively affect long term and current health status. Almost 75% of Canadians have made changes in their lifestyle within the last two years. Some of these changes are related to diet.

While the most popular reasons to choose a food are taste and preference, the next most popular reason is that the food provides good nutrition (57% of Canadians choose food for this reason).

Health is important but 75% of Canadians choose foods based on what the whole family enjoys. Over 60% of Canadians choose certain foods because 1) variety is important for health; 2) maintain a heart healthy diet; and 3) select foods for health reasons. The most popular food choices for health benefits are vegetables (53%), fruit (40%) and fish (17%).

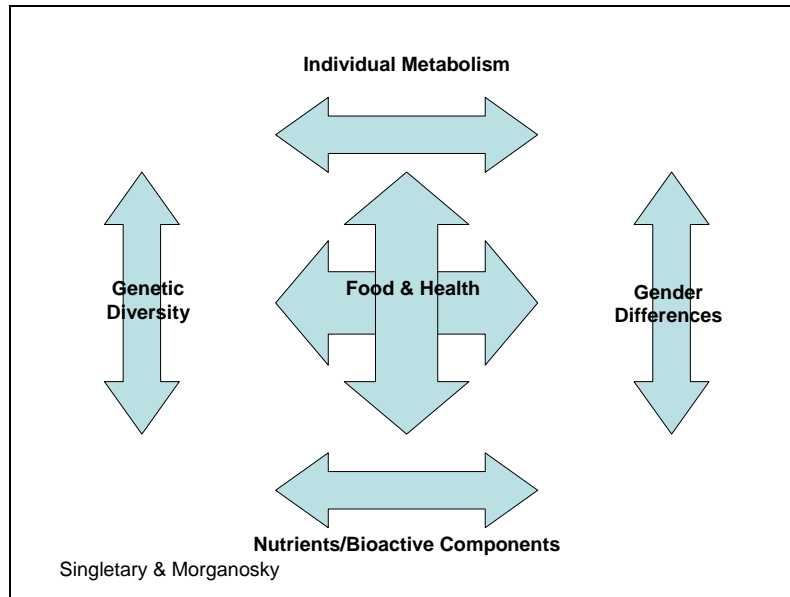
- **Functional Foods:** The awareness level of Canadians about functional foods increased between 2000 and 2004. 60% of Canadians can name at least one functional food. The most popular responses were fibre, broccoli, dairy and green leafy vegetables. 24% of Canadians can match at least one food with a health condition.

When asked about the likelihood of eating foods containing specific beneficial components (lycopene and omega3), consumers responded that they would be most likely to consume these components by eating natural foods like tomatoes and fish. As in 2000, Canadians prefer to obtain beneficial components from the least processed foods. If the component does not occur naturally, the most popular foods that it can be added to are yogurt, cheese, cereal, bread, salad dressings, and condiments.

Environics conducted market research on health professionals' awareness, attitudes, knowledge and information sources about functional foods and nutraceuticals for AAFC in 2004. Highlights of the research are as follows:

- More than 80% of health professionals believe that "certain foods have health benefits beyond basic nutrition/may reduce risk of disease". Of the five professions, naturopaths had the most confidence that certain foods had benefits additional to nutrition.
- Vegetables (28%) and fruits (25%) were the most mentioned types of food with health benefits.
- Health professionals were more likely to recommend a functional food or nutraceuticals in a naturally occurring format rather than a manufactured product.
- Health professionals desire more information about functional foods and nutraceuticals.

The market for functional foods shows a great deal of promise. However, the market for functional foods **will not reach its potential until more scientific research is done** on the food/health equation. The variables in the food/health equation are shown below. (Singletary and Morganosky)



Assessment of Evidence

Canadian consumers are aware of the relationship between food and health. Increased demand for functional foods would improve farm income.

Are consumers aware of the relationship between food and health?

- The evidence is clear that consumers are aware of the relationship between food and health. This has been established by the studies by the CFA, Decima Research and Environics.
- Society and policy makers are also increasingly aware of the relationship between food and health. In 1993 in Canada, the cost of coronary heart disease, cancer, stroke and diabetes which are diet related diseases was \$29.4 B (in 2004 dollars). Public policy may be one of the tools used to improve nutrition and physical activity.
- Awareness of functional foods by Canadian consumers has increased (Decima Research) and many have made changes to their diets in order to improve their health. Consumers in Canada prefer to obtain the healthful benefits of foods in the least processed form possible. Health professionals also appear to prefer functional foods in naturally occurring forms.

Based on the above evidence, the hypothesis that Canadian consumers are aware of the relationship between food and health can not be rejected. However, because not all consumers are willing to pay for functional/natural foods, the impact of increased demand for functional foods on aggregate farm income will be small.

Environmental Concern

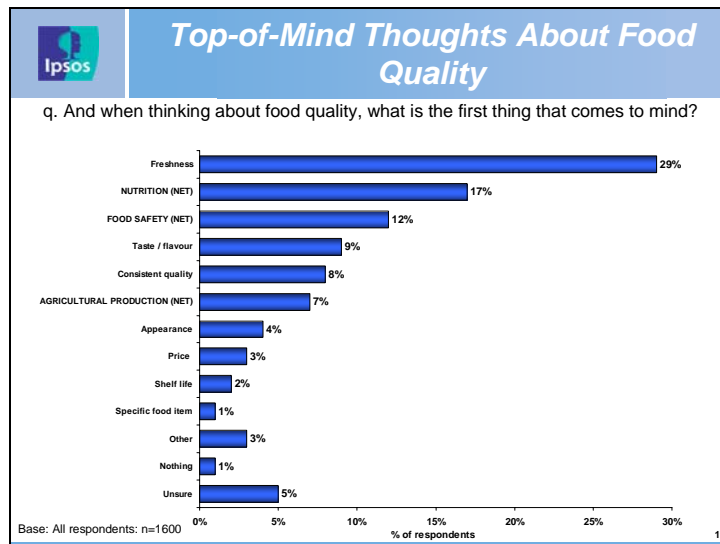
Concern for the environment by Canadian consumers is growing and they would be willing to pay more for food produced in an environmentally sustainable fashion.

Evidence

Analysis done for the CFA **found that the top of mind issue between 1999 and 2002 was the effect of chemicals on health and the environment.** A study by Ekos found that Canadian consumers viewed farming favorably because it produces high quality food and that farming was recognized as being environmentally responsible. Another 2001 survey by Ipsos Reid found that:

- 37% of Canadians considered agriculture as a serious environmental risk
- 60% of Canadian considered agriculture as having a high level of environmental stewardship
- 3% didn't know
- 73% believed that agricultural could protect the environment by changing its practices at very little cost while 82% believed that each farm should have a written environmental plan.

In a 2004 survey of Canadian consumers Ipsos Reid found that **agricultural production and environmental sustainability are not very important top of mind considerations.**



Market research on Canadian consumers' willingness to pay for climate change by The Summerhill Group on behalf of the Consumers Council of Canada found that: (Consumer Council of Canada)

- Consumers did not know about Canada's climate change plan or the one tonne challenge (75% were not familiar or somewhat familiar).
- **Consumers were not prepared to pay higher prices for appliances to create environmental benefits.**
- Rebates and free products would increase the amount of energy efficient products sold.

Assessment of Evidence

Environmental Concern: Concern for the environment by Canadian consumers is growing and they would be willing to pay more for food produced in an environmentally sustainable fashion.

Are consumers concerned about the environmental impact of agriculture and would they be willing to pay more for more environmentally friendly food?

- The importance of the environmental sustainability of agriculture appears to have decreased since 1999 – 2002. Currently, it does not appear to be a major issue with consumers.
- Although the evidence is indirect (ie the purchase of environmentally friendly appliances) consumers do not appear willing to pay more food produced in an environmentally sustainable fashion.

Based on the evidence, we can not accept the environmental concern hypothesis.

Agriculture is Important

Agriculture is important to Canadians and they are willing to see farm incomes subsidized.

Evidence

A 2001 survey by Ipos-Reid found that greater than 90% of Canadian viewed agriculture as either very or somewhat important to them. Respondents recognized agriculture's contribution to the economy and its quality of life. Agriculture was also viewed as being an innovative sector. (CFA)

A study by Goldfarb found that Canadians believe that it is important to maintain farm communities and that young people should have the opportunity to farm. (CFA)

A study by Ipos Reid in 2001 found that Canadians believed farmers made less money than they used to because of increased competition, free trade and higher input costs. **The result of a study by Ekos suggests that Canadians support government action on farm income.** (CFA)

A survey by Ekos found that 67% of Canadians would support the Canadian government subsidizing Canadian farmers to counter the negative impacts of

foreign farm subsidies. A study by Ipsos Reid found that while Canadians supported special programs for rural communities they also wanted the government to secure more free trade in agricultural products. (CFA)

A study by Ekos found that 72% of Canadians believed that the government should take action to ensure family farms survive, even if taxes had to be raised to do so. (CFA)

Assessment of Evidence

Agriculture is Important: Agriculture is important to Canadians and they are willing to see farm incomes subsidized.

The most recent research available suggests that Canadians are willing to subsidize farm incomes.

- Agriculture is important to Canadian consumers.
- Consumers believe that foreign subsidies are hurting Canadian producers and that they should receive government from the assistance to offset the impact of the foreign subsidies.
- Consumers also believe that producers' incomes are being hurt by increased competition, free trade and higher input costs and that because of these factors producers should be subsidized.
- The family farm is important to Canadian consumers and they are willing to pay more taxes to ensure family farms survive.

Based on the above evidence, we can not reject the Agriculture is Important hypothesis.

CONCLUSIONS

The study examined seven hypotheses regarding consumer attitudes towards food and farming and farm income. The hypotheses were as follows:

Food safety is important to Canadian consumers and they are willing to pay more for safer food. The implementation of more or enhanced food safety programs (such as traceability) would increase the demand for food produced in Canada which would result in an increase in farm income.

The quality of food is important to Canadian consumers and they are willing to pay for high quality food. Producing higher quality food would increase the demand for Canadian food which would result in an increase in farm income.

Consumers and foodservice firms are looking for differentiated products. Filling this need would improve farm income.

Canadian consumers prefer food produced in Canada to food produced in other countries. The higher prices for Canadian food products would improve farm income.

Canadian consumers are aware of the relationship between food and health. Increased demand for functional foods would improve farm income.

Concern for the environment by Canadian consumers is growing and they would be willing to pay more for food produced in an environmentally sustainable fashion.

Agriculture is important to Canadians and they are willing to see farm incomes subsidized.

These hypotheses were then tested using available evidence and the results are summarized below.

Hypothesis Testing			
Hypothesis	Accept/Reject	Impact on Farm Income	
		Direction	Magnitude
Food Safety	Reject – is a basic requirement, is a global public good		
Food Quality	Reject – is a basic requirement		
Differentiated Products	Accept	Positive	Small
Canadian Made Food	Accept – for small price premium	Positive	Small
Functional Food	Accept	Positive	Small
Environmental Concern	Reject		
Agriculture is Important	Accept	Positive	Large

The **food safety hypothesis** was rejected because the evidence did not clearly indicate that consumers would pay for a system guaranteeing the safety of food. In addition, if food safety is viewed as a global public good, Canadian consumers would be unwilling to pay for an enhanced food safety system that benefits consumers in other countries

The food quality hypothesis was also rejected. The evidence did not clearly indicate that consumers were willing to pay for higher quality. Price is likely the over-riding factor in product selection.

The evidence suggests that we should accept the hypothesis that consumers and food service firms are looking for differentiated products. Consumers, food retailers and food service firms are all searching for new and differentiated products. **However, the impact on farm income is likely to be small.** Much of the value of differentiated products is captured by the processing and retailing sectors and not the producer unless the producer is actively involved in these activities. The demand for differentiated products could create many small but profitable niche markets. These markets could improve farm income for some producers.

Consumers do appear to prefer food produced in Canada. Based on the evidence we **can accept the hypothesis that Canadians prefer food produced in Canada.** However, price is important and locally produced food is likely to remain a niche product. The impact on aggregate farm income of Canadian produced food will be small.

Consumers are increasingly aware of the link between food and health. **The hypothesis that Canadian consumers are aware of the relationship between food and health can not be rejected.** However, because not all consumers are willing to pay for functional/natural foods, the impact of increased demand for functional foods on aggregate farm income will be small.

Because consumers do not currently appear willing to pay for environmentally sensitive food, we can not accept the environmental concern hypothesis.

Agriculture appears to be important to consumers and they appear willing to subsidize farms, **we can not reject the Agriculture is Important hypothesis.**

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