



Changing Consumer Demands

The Government of Canada and the provincial and territorial governments are working with the industry and interested Canadians to develop an agricultural policy for the 21st century. The objective is for Canada to be the world leader in food safety, innovation and environmentally-responsible production. This proposed policy direction recognizes the increased challenges that Canadian producers face as they work to adapt to rapid advances in technology and compete against other countries in an increasingly complex global food market.

The following is one of a series of three background briefs on key challenges that need to be addressed in building a stronger agriculture and agri-food sector in Canada:

- The effects of competition and subsidies in global markets;
- Rising consumer demands for food safety, enhanced environmental stewardship and other quality attributes; and
- The importance of skills and knowledge in an era of advancing science and technology.

Meeting consumer demands

Consumer demands are changing the face of agriculture

As the standard of living in Canada and other developed countries has risen, per capita food consumption has stabilized and basic food needs are being met. At the same time, consumers are more discriminating about the food they buy. They want safe food, as a minimum, but they also want a greater choice of food with look, taste, nutritional value and convenience as the key factors. They also want assurances that it is produced in an environmentally-responsible manner.

Many suppliers are developing systems that demonstrate to both existing and potential customers that their products meet the specifications demanded by consumers. At the same time, these suppliers are taking advantage of changing consumer preferences to gain new markets and develop niche markets with potential price premiums, which consumers may be willing to pay. This willingness presents opportunities in agriculture because studies show that as the average income of consumers rises, their willingness to pay for specific quality attributes also rises.

The challenge facing producers and processors is how to respond to these rising consumer demands. They must adapt if they want to capitalize on the opportunities that are available by meeting these consumer demands.

Ensuring food safety

Food safety is essential

Food safety has always been important to consumers and continues to be a basic requirement of a modern food system. Surveys show that food safety is a high priority for almost 80 per cent of Canadians. Recent high-profile food safety catastrophes include Mad Cow Disease (BSE), dioxin contamination in Europe and E-coli 0157:H7 in hamburger and unpasteurized juice here in North America. If producers and processors cannot assure Canadians of food safety, producers and processors risk major interruptions to their business, loss of exports and a downgrading of Canada's reputation as a supplier of safe and high-quality food.

These concerns are the driving force behind the use of new standards and systems to promote quality assurance and food safety. Programs based on the Hazard Analysis Critical Control Points (HACCP) and tracing systems in some parts of the food chain, particularly the processing sector, are now extending to other parts of the food chain including the farm level. Major commodity groups are developing programs.

For example, producers are tagging the ears of beef cattle to allow tracing of individual animals back to the producers.

Tracking and tracing systems can also contain the cost of disease outbreaks. The recent outbreak of Foot and Mouth Disease (FMD) in the United Kingdom was very costly. It is widely acknowledged that the control of the outbreak was complicated by difficulties in tracing animal movements, due in particular to a lack of an effective identification of all farm animals. In this case, the tracking of the movement of sheep proved difficult and in some cases impossible. Infected sheep criss-crossed the country prior to authorities realizing they had an outbreak. The Federation of Veterinary Surgeons of Europe is now calling for the identification of all farm animals with a more effective system for tracing movement internationally, within country, or between individual farms.

Cost of disease outbreaks can be large

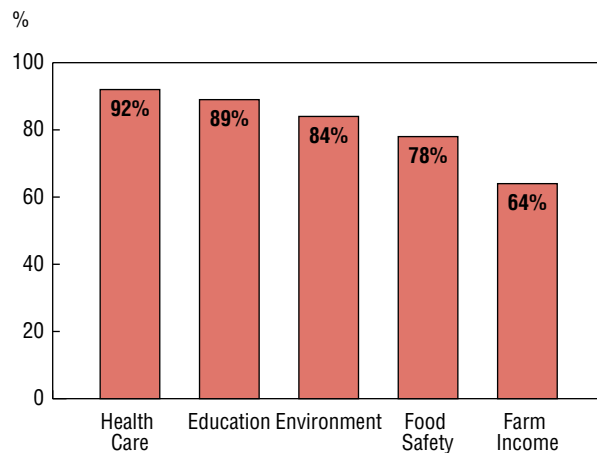
Helping contain disease outbreaks is a major benefit of food safety systems, given the potentially devastating cost of disease outbreaks. For example in 1996, with the outbreak of Mad Cow Disease, the United Kingdom had an immediate 40 per cent drop in sales of beef products and a 26 per cent drop in household consumption of beef and veal.

Similarly, the economic impact of the recent FMD outbreak to the United Kingdom and the European Union in 2001 was estimated at \$C6–\$18 billion. Even though FMD is not a human health issue, the impact was widespread because of restrictions imposed by various countries on travel, trade and animal movement affecting agriculture, tourism, trade and food consumption. If a similar outbreak were to happen in Canada, it is estimated that livestock producers would experience approximately a 50 per cent decline in the price of their products.

The costs to society are also high. According to the USDA, the social and economic cost of food-borne illnesses from five known pathogens in the United States (*Campylobacter* spp, salmonella, E-coli 0157:H7, E-coli non-0157 STEC, and *Listeria monocytogenes*) was estimated at \$US7 billion annually.

Consumer attitudes towards selected issues, 2001

% of citizens who consider the issue a high priority



Source: Ekos, 2001

Agriculture and the environment

More progress is needed on the environmental front

Environmental concerns are also considered a high priority by 84 per cent of Canadians, who increasingly recognize the role of the environment in quality of life and human health issues. They also recognize the fundamental link that exists between agricultural production and the environment. They are placing increasing demands on farmers and processors concerning the environmental soundness of their production methods.

Producers are responding to these concerns. Many are beginning to implement environmental farm plans (19 per cent of Canadian farm operators had intentions to do so in 2001) and management practices that will ensure long-term sustainability and prosperity. Implementing these plans and practices will also help to address growing concerns about certain practices such as intensive farming operations. There has been a marked increase in the number of media reports covering the opposition to intensive farming operations in recent years.

These concerns are consistent with knowledge of the pressure points on the environment arising from farm production and practices. Agri-environmental indicators, which measure success in managing these pressure points, show mixed results, as indicated in the box below:

Agri-environmental indicators show mixed results

Risk of water contamination increased:

- Percentage of farmland where nitrogen content in water has increased (more than 1 mg of nitrates per litre) between 1981 and 1996: 77% of Quebec farmland and 68% in Ontario.
- Percentage of farmland at high risk of water contamination by nitrogen in 1996: 69% in British Columbia.

Soil quality improved:

- Percentage of Prairie cropland at high risk of wind erosion between 1981 and 1996 fell from 15% to 6%.
- 85% of Canadian cropland is at a tolerable risk of soil erosion by water; an improvement over the period 1981–1996.

Climate change impact:

- Greenhouse gas emissions from agriculture between 1981 and 1996 increased 3.5%.

Agricultural habitat trends mixed:

- Agricultural wildlife habitat increased in some regions, and either decreased or remained constant in others between 1981–1996.

Environmental planning by producers:

- 35% of Ontario farmers participated in environmental farm planning workshops in 2000.
- 12% of Quebec farmers participated in agri-environmental clubs in 2000.

Source: AAFC Report of the Agri-Environmental Indicators; and Great Lakes and St. Lawrence River Basin: Report of the Commissioner of the Environment and Sustainable Development – 2001.

Changing demands and the agri-food chain

Relationships along the agri-food chain are changing

As consumers increasingly express greater concern for food safety and the environment and demand specific food quality attributes, changes are occurring throughout the agri-food chain. Major commercial buyers at the processing and retail levels, who are quite often at the forefront of changing market trends, are placing new demands on input suppliers

regarding tighter specifications on attributes and methods of production. They are establishing new marketing relationships and linkages with producers to position themselves to respond to changing consumer demands. These linkages include developing contracts with producers that combine rigid production protocols with a greater certainty on sales and guarantees on prices.

Changing relationships in the agri-food chain

The drive to quality in the global food market is changing relationships across the agri-food chain. A particular example of these changes is occurring in the pork industry. A major Canadian pork processor contracts with producers for hogs with the following terms:

- The contracted producer is bound to specific production methods and must keep formal records. For example, they must vaccinate against diseases such as pneumonia as directed by veterinarians, generate ID's for individual pigs and ensure that hogs are free of drug residues.
- There are also stringent quality requirements on the final product such as acceptable fat hardness and colour score.
- In return, the producers receive a price that is comparable to those in world markets, and are assured of a more predictable cash flow. They also receive technical assistance in the form of state of the art feed and nutrition programs and animal genetics.

This type of contract also benefits the consumer through the provision of safe, nutritious and high quality food products, and provides traceability through a formal record keeping system.

The potential for price premiums is increasingly evident in markets where producers are responding to consumer preferences for specific product attributes. In Ontario, soybean producers developed an identity preservation system that allowed them to expand sales into the lucrative Asian market for food-grade white hilum soybeans. About 30 per cent of Ontario sales are currently identity preserved. By moving quickly into niche markets, these producers have been capturing price premiums of between 10 per cent and 50 per cent.

Another example is organic food in the United States. Consumers are paying price premiums of 50 per cent for cereal crops, 60 per cent for dairy and up to 100 per cent on fruits and vegetables for what they perceive to be safer, more nutritious food.

Other countries' responses to rising consumer demands

Throughout the world, other countries are responding to consumer concerns about food safety and the environment. The United States is considering more funding for environmental programs, such as technical assistance to farmers to learn about environmentally friendly production practices and expansion in conservation programs. Australia, New Zealand and various countries in the European Union are introducing systems of quality assurance and food safety as well as environmental farm plans, certifications and regulations to address citizens' concerns.

Many countries are also considering more stringent technical standards for both domestic production and imports, including restrictions on certain varieties and increased demand for documentation of food content. Given the importance of export markets for most Canadian food products, the way Canada responds will directly affect the future growth opportunities of the agri-food sector.

Summary

- Increasing consumer demands for food safety, food quality, and new production methods are transforming agriculture and agri-food sectors.
- Major players in the agri-food chain are responding by developing new marketing relationships and placing new demands on producers and processors.
- Other countries are responding to consumer demands by reforming domestic policies and increasing technical standards for imports.
- For Canada and its export markets, the ability of the industry and governments to respond to consumer demands will determine success in the future.

Bibliography

- "Animal Identification and Labelling," paper presented by the Canadian Cattlemen's Association at the Five Nations Beef Conference 2000, Kingston, Australia.
- Brinkman, G. and J. Heigh. 2001. *An Assessment of the Market Implications for the Introduction of Genetically Modified White Hilarum Soybeans*, Faculty of Agricultural Economics, University of Guelph.
- Buzby, Jean C. "Effects of Food-Safety Perceptions on Food Demand and Global Trade," in *Changing Structure of Global Food Consumption and Trade*, Economic Research Service, WRS-01-1, May 2001.
- Buzby, J.C. and T. Roberts. "ERS Updates U.S. Food-Borne Disease Costs for Seven Pathogens," *Food Review*, Vol. 19, No. 3, Sept.– Dec. 1996, pp. 20–25.
- Canadian Phytopathological Society. 2001. *Potato Wart*. www.cps-scp.ca/potatowart.htm.
- Department for Environment, Food & Rural Affairs. 2001. *Foot and Mouth Disease—Source of the Outbreak: How the 2001 Outbreak of Foot and Mouth Began*, at www.defra.gov.uk/animals/diseases/fmd/about/current/source.asp.
- Ekos Poll. May 2001. *Listening to Canadians*. Communication Canada.
- Federation of Veterinary Surgeons of Europe (FVE). 2001. International Conference on Prevention and Control of FMD: FVE Contribution, 12–13 December, 2001, Brussels.
- Greene, C. 2001. "U.S. Organic Farming Emerges in the 1990s: Adoption of Certified Systems." U.S. Department of Agriculture, Economic Research Service, Resource Economics Division, *Agriculture Information Bulletin* No. 770.
- McRae, T., C.A.S. Smith and L.J. Gregorich, editors. 2002. *Environmental Sustainability of Canadian Agriculture: Report of the Agri-Environmental Indicator Project*. AAFC. Ottawa. Canada.
- Office of the Auditor General. 2001. *Report of the Commissioner of the Environment and Sustainable Development, 2001: the Great Lakes and the St. Lawrence River Basin*.
- Organization for Economic Cooperation and Development. 2001. *Adoption of Technologies for Sustainable Farming Systems*. Wageningen Workshop Proceedings.
- Perrault, C. 2002 (forthcoming). *Climate Change and Greenhouse Gas Questionnaire and Study*, AAFC working paper.
- Schweikhardt, David B. and W.P. Browne. 2001. "Politics by Other Means: The Emergence of a New Politics of Food in the United States." *Review of Agricultural Economics*, Volume 23, Number 2, Fall/Winter, pp. 302–318.
- Short, C. and M. Cluff. 2001 (forthcoming). *Understanding the Potential Impacts of a Foot and Mouth Outbreak in Canada*, Research and Analysis Directorate, AAFC discussion paper.
- Smyth, S. and P. Phillips. 2001. *Identity-Preserved Production and Marketing Systems in the Global Agri-Food Market*, ADF Project 19990046, University of Saskatchewan.
- Summary of U.S. House of Representatives Farm Bill* (Farm Security Act of 2001), at www.agriculture.house.gov.
- Thompson, D. 2001. "Economic Consequences of the FMD Outbreak on the Wider Economy in the UK." International Conference on Prevention and Control of FMD, 12–13 December, 2001, Brussels.