



Agriculture and  
Agri-Food Canada

Agriculture et  
Agroalimentaire Canada



# ***AAFC'S Analytical Priorities and Data Requirements***

*NADM Workshop  
October 15-17, 2008*

**Canada**

## *Outline*

- Challenges facing the agriculture and agri-food sector
- Policy Research at AAFC
- Data Requirements

### *Globalization and technological change continue to shape the performance of the agriculture and agri-food sector*

- Globalization and trade liberalization opened Canadian agriculture to the world.
  - ❖ Much greater market integration across North America since NAFTA.
  - ❖ Since GATT/WTO increased export orientation especially in value added products.
  - ❖ New sources of demand from developing countries such as China and India.
- Technological change has been re-shaping the competitiveness and structure of primary agriculture and processing.
  - ❖ Facilitated increased productivity in key competitors such as Brazil and Argentina.
  - ❖ Continued competitiveness for Canada will depend on its ability to adopt productivity enhancements (genetics, management skills etc).

### *Changing consumer and market demands*

- Consumers are more discriminating about the food they buy. Consumers demand:
  - ❖ Safe food
  - ❖ Greater choice of attributes, e.g. look, taste, nutritional value and convenience, and
  - ❖ Assurances that food is produced in an environmentally-responsible manner
- Global supply chains are becoming a major force in world markets:
  - ❖ Developing private standards to demonstrate to both existing and potential customers that their products meet the above specifications
    - Sustainable Agriculture Initiative (SAI) Platform -- Processors & Producers
    - GlobalGAP – Retailers/Processors/Producers
  - ❖ Taking advantage of changing consumer preferences and demographic shifts to gain new markets and develop niche markets

### *Climate change and its potential impacts*

- Supply declines due to drought in Australia and poor weather in Europe contributed to the most recent global food crisis
- Potential impacts on Canadian agriculture:
  - ❖ Changes in our comparative advantage both within Canada and between Canada and other countries.
  - ❖ Changes in composition and location of production.
  - ❖ Increased demand for Canadian products.
  - ❖ Increased vulnerability to droughts and floods.
  - ❖ Opportunities for carbon sinks.
  - ❖ Above all, more variability and more uncertainty affecting long-term investment decisions and government programs.

*Policy Research at AAFC is at the forefront in addressing these challenges*

- A major role of the Research and Analysis Directorate (RAD) in the Strategic Policy Branch of AAFC is to develop and provide economic data, information and analysis with the following objectives:
  - ❖ To improve understanding of the structure and performance of the agriculture and agri-food sector, and
  - ❖ To support policy development
- Results are used throughout AAFC and externally:
  - ❖ To support government and industry's efforts in developing strategies to improve the performance of the sector
  - ❖ To support broad policy priorities and inform the policy development process
  - ❖ To report to Canadians and Parliament on the performance of the Canadian agri-food sector

## *RAD ongoing research projects*

- Ongoing projects report on the structure, performance and outlook for Canadian agriculture and agri-food sector
  - ❖ The outcomes of these projects include:
    - Annual Overview of the Agriculture and Agri-Food System
    - Farm Income Forecast
    - Bi-Weekly Bulletins reporting on Supply and Disposition of Grains and Oilseeds
    - Farm Income, Financial Conditions and Government Assistance Data Book
    - Medium Term Outlook for Canadian Agriculture
    - Farm Program Forecasts
    - Highlights of the Farm Financial Surveys
  - ❖ Ongoing research projects also include:
    - Analysis of developments in international markets
    - Changes in commodity and food prices
    - Structure and diversity of farms
    - Structure and performance of food processing sector

*Policy research focused on Growing Forward priorities*

• **Developments in global agri-food markets:**

- ❖ Rapid economic growth in emerging economies, such as Brazil, Russia, India and China (BRIC) is shifting our analytical focus and changing notions about who our competitors are and where agri-food market growth will occur
- ❖ The rise of global supply chains will be affecting how various players in supply chains in Canada are playing in global markets, making it an important research area by looking at:
  - Impact of private standards globally
  - Impact on performance and competitiveness of the Canadian agri-food sector

*Policy research focused on Growing Forward priorities*

• **Agri-environmental policy research:**

- ❖ Approach is to use economic models in conjunction with Agri-Environmental Indicators to provide forward looking integrated assessments of the impacts of GHG and environmental sustainability initiatives
- ❖ This program of analysis will deliver the following information:
  - Estimates of the sector's potential to contribute to mitigation of GHG
    - Capacity to sequester carbon in our soils and participate in an Offset System
    - Best Management Practices (BMP) to reduce emissions and their impacts on performance of primary agricultural sector
    - Biomass as feedstock for energy production (ethanol, biodiesel, electricity) and its impacts on land use patterns and farm income
  - Assessment of the impact of climate change on the agricultural sector and the development of adaptation strategies for key policy areas - Business Risk Management (BRM), science, environment, FSQ, trade
  - Projects include enhancing modeling capacity on water supply, input into OECD work on sustainable management of water and IISD analysis on water quality trading and Climate Change

### *Our analysis relies on various sources*

- Available economic data for the sector (such as Statistics Canada data, including Census of Agriculture, land use, commodity/livestock prices, production and trade, food prices, exchange rates, energy costs, fertilizers costs, other input costs, GDP growth, personal income and consumption trends, population trends etc.).
- Climate data, biophysical data (water, soils and crops), and land and water management information obtained from AAFC Research Branch, PFRA & Environment Branch and other government departments (including other jurisdictions) and organizations
  - ❖ For instance, real time data (i.e. daily weather/water and moisture data) are used in generating yield data to support short term forecast for program delivery
  - ❖ These yield data become part of the historical data that RAD uses for its trend analysis and long run forecast activities
  - ❖ The economic model (CRAM) uses most of the above data in support of the agri-environmental research in RAD. For example, the long run yield forecasts that feed CRAM are obtained outside RAD. They are generated from a biophysical model (EPIC) running daily climate data
- Potential future use for weather/moisture data in predicting potential future scenarios.

*We benefit from information through collaboration with a wide range of organizations*

- Other Federal departments
  - ❖ Natural Resources Canada (climate change)
  - ❖ Environment Canada (climate change, offsets)
  - ❖ Statistics Canada (data, national data management)
  - ❖ Department of Foreign Affairs and International Trade (offsets, international negotiations)
- Provincial Governments
- Producer organizations
- Non Governmental Organizations
  - ❖ International Institute for Sustainable Development
  - ❖ Ducks Unlimited
  - ❖ and others
- International
  - ❖ USDA Economic Research Service
  - ❖ UN Framework Convention on Climate Change (UNFCCC)
  - ❖ OECD
- Universities and Networks
  - ❖ Agriculture Policy Research Networks