Canadian Food Inspection Agency
Agence canadienne d'inspection des aliments

Canadian Food Inspection Agency




Our vision:
To excel as a science-based regulator, trusted and respected by Canadians and the international community.

Our mission:
Dedicated to safeguarding food, animals and plants, which enhances the health and well-being of Canada's people, environment and economy.

Pathogen Reduction in Meat and Poultry

Anne-Marie St-Laurent, Director
Food Safety Division, Science Branch

Daniel Leclair, Chief Food Microbiology Surveys
Food Safety Division, Science Branch

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Canada

Purpose

- Provide an update and next steps on the Pathogen Reduction Initiative (PRI)

- Provide an update of the development of a Microbiological Baseline Study (MBS) in Beef

Overview

- The PRI is a joint federal, provincial and territorial initiative
- The goal is to decrease the health risks and economic impact of food-borne pathogens in Canadian meat and poultry
- The main activities of this initiative will be to:
  - Assess current pathogen levels in Canadian meat and poultry
  - Establish pathogen reduction targets
  - Identify and implement strategies to monitor and reduce pathogen levels

Drivers

- The PRI will establish a national baseline in four key pathogens in meat and poultry:
  - *Salmonella* and *Campylobacter* in broiler chicken
  - ***E.coli* 0157:H7 and other Shiga toxin-producing *E. coli* (STEC) in raw ground beef, trim and carcass**
  - *Listeria monocytogenes* in ready-to-eat meats
- These four key pathogens were selected based on impact on public health and the economy
- The information collected will be used:
  - To develop pathogen reduction programs
  - To serve as benchmarks to measure the effectiveness of pathogen reduction measures

Stakeholder Engagement

Broad consultations

- A National Stakeholder Information Session was held in February 2011 – support from industry, NGOs and provinces

Commodity specific consultations

- Canadian Poultry and Egg Processors Council
  - CFIA working group with Micro Sub-Committee of CPEPC
- Chicken Farmers of Canada
- Canadian Federation of Independant Grocers & Retail Council of Canada
- Provinces

Working in partnership

- CFIA/industry collect MBS samples at abattoir while provinces are responsible for those at retail
- The sample delivery rate for the period between Dec 3/12 to Jan 18/13 was 96%

Timelines for the MBS in Broiler Chicken

Implementation	November 2012 – November 2013
Analysis of laboratory results	March 2013 – January 2014
Writing and completion of final report	January – March 2014
Distribution of final report	March 2014

- Industry will be asked to review the final report before public release
- A communication strategy will be developed by the CFIA in consultation with governments and stakeholders to effectively communicate the results of the baseline study

Other areas of collaboration with industry on PRI

- Design baseline sampling programs for other priority hazards / commodity combinations
- Use industry data as surveillance data between national baseline sampling programs for trend analysis
- Use industry data on interventions to explore the relationship between interventions and baseline data (e.g., Plant Profile)

NATIONAL BASELINE STUDY ON *ESCHERICHIA COLI* O157:H7 AND OTHER SHIGA TOXIN-PRODUCING *E. COLI* ON BEEF CARCASSES AND MEATS

STATUS: DESIGN PHASE

STEC baseline studies in cattle carcasses and beef meat processed in Canada

- The most recent national baseline study on *E. coli* O157:H7 was conducted in ground beef, about 10 years ago
- No baseline data on the prevalence of *E. coli* O157:H7 on beef carcasses at any processing steps or on trims used to manufacture ground meat
- Little data on the prevalence of non-O157 *E. coli* in Canadian ground beef or other beef products

Study	Time period	Target organisms	Sample type	Sample#	%ve
National					
CFIA/HC	2001-02	*E. coli* O157:H7	Ground meat	1,370	0.8
Provincial					
Ontario	2000-01	STEC	Carcass	1,556	0.3

US baseline studies on STEC on cattle carcasses and beef meat

- Several baseline studies have been conducted by FSIS to estimate the prevalence of *E. coli* O157:H7 on beef carcasses and raw beef products processed in federal establishments
- In addition, various raw beef components used in the manufacture of ground beef were included in their baseline sampling program
- FSIS now intends to redo their baselines on carcasses and will collect one surface meat sample immediately at post-hide removal and another at post-chill

Study	Time period	Target organisms	Sample type	Sample#	%ve
National					
FSIS	1992-93	*E. coli* O157:H7	Steer/heifer carcass	2,081	0.2
FSIS	1993-94	*E. coli* O157:H7	Cow/bull carcass	2,112	0.0
FSIS	1993-94	*E. coli* O157:H7	Ground meat	563	0.0
FSIS	2005-07	*E. coli* O157:H7	Trims	1,900	0.7

New MBS on cattle carcasses and beef meat under development

Objectives

- To provide baseline data on the prevalence of *E. coli* O157:H7 and specific STEC serogroups on cattle hide, carcasses, beef trims, and raw ground beef
- Evaluate the effect of intervention measures on the concentration of generic *E. coli* on carcasses during the slaughter process and on the microbial quality of end products
- Evaluate the relationship between hide prevalence and carcass contamination with *E. coli* O157:H7 during the slaughter process

New MBS on cattle carcasses and beef meat under development

Target population and products

- Cattle population including steers/heifers and cows/bulls (hide sampling at abattoir)
- Hide-off carcasses at pre-evisceration and post-chill
- Beef trims (including bench trims)
- Raw ground beef

Analytical methods

- Health Canada methods equivalent to FSIS methods for the detection of *E. coli* O157:H7 in ground beef and beef trims
- CFIA method for detection of serogroups O26, O45, O103, O111, O121 and O145

Next Steps

• Complete the MBS in broiler chicken	November 2013
• Continue to inform stakeholders of progress made	Ongoing

• Initiate discussions on the control of *Campylobacter* and *Salmonella* in chicken
  • Setting performance targets
  • Identification of mitigation measures
	Spring 2013

• Complete design of the *E.coli* 0157:H7 and other STEC in raw ground beef, trim and carcass	Summer 2013
• Secure funding for the MBS in beef	Underway
• Launch MBS in beef	TBC

For more information

Anne-Marie St-Laurent
Director, Food Safety Division
Canadian Food Inspection Agency
Anne-Marie.St-Laurent@inspection.gc.ca
(613) 773-6473

Dr. Daniel Leclair, DVM, PhD
Chief, Food Microbiology Surveys
Canadian Food Inspection Agency
Daniel.Leclair@inspection.gc.ca
(613) 773-6543

F/P/T Pathogen Reduction Initiative Website:

http://www.inspection.gc.ca/food/meat-and-poultry-products/pathogen/eng/1338819927004/1338819992816