


BCRC BEEF SCIENCE CLUSTER

RESEARCH

Facts

IN PROGRESS




Canada's Beef Science Cluster: Food Safety Research

✓  Saving 1¢ per pound (carcass weight basis) due to reduced food safety recalls would save Canada's beef industry \$21 million per year.

Objective: Maintain domestic and international consumer demand for beef by developing improved food safety interventions, methods to quantify the effectiveness of food safety interventions, and developing food safety intervention strategies that counteract multiple pathogens.

Human illness linked to beef and product recalls due to the adulteration of meat products with pathogens continues to be a major concern for the Canadian beef industry. The industry has been proactive in conducting research on mitigation strategies both on-farm and in abattoirs. Considerable investment in antimicrobial procedures (e.g. lactic acid washes, carcass pasturization) have already been implemented in Canadian abattoirs. Despite these steps, recalls continue to occur and approximately two per cent of trim produced must be used in cook-only applications or rendered (at significantly reduced value) because of detection of *E. coli* 0157:H7. Environmental outbreaks have also been linked to cattle operations and these can impact water supplies as well as fruits and vegetables.

Additional interventions are being developed to further enhance the safety of beef products and to help address the presence of *E. coli* 0157:H7 in the environment. On the farm, these include vaccines, water treatments, and probiotics. In the abattoir, lactic acid treatment of beef trim, subprimals and primals has recently been approved by Health Canada. In some cases food safety interventions can have additional benefits for the industry by extending shelf-life or enhancing animal performance. Regardless of where interventions occur from gate to plate, the Canadian beef and cattle industry must seek the most effective and affordable treatments to ensure continuing competitiveness while fully achieving food safety objectives. Several projects have been proposed to evaluate interventions and identify the most effective and affordable treatments for the Canadian beef and cattle industry.

- ✓  Healthier Hamburger FOS.01.09
- ✓  Do wheat DDGS affect *E. coli* 0157:H7 shedding? FOS.02.09
- ✓  Training New Food Safety Researchers FOS.03.09

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