

Food safety risk evaluation of fresh fruits and vegetables for inclusion on a risk assessment model used for decision making in the regulatory oversight of produce establishments

Elisabeth Mantil[1], Elva De la Rosa[2], Romina Zanabria[1], Manon Racicot[1], Sylvain Quessy[2]

[1]Canadian Food Inspection Agency, ON K2C 4B5, CAN, [2]Université de Montréal, QC J2S 2M2, CAN

The Canadian Food Inspection Agency (CFIA) has developed an Establishment-based Risk Assessment (ERA) model to assess the food safety risk (expressed as health burden or Disability-Adjusted Life Years (DALYs)) of federally regulated food establishments. This new approach strengthens the efficacy of resource allocation to high-risk areas. When assessing the risk, one factor considered by the model is the type of commodity and sub-product manufactured by the facility. Within the produce sector, fresh fruits and vegetables (FFV) carry the highest risk, contributing up to 63% of the total source attribution estimate for foodborne illness associated with this commodity. This work investigated categorizing FFV products (e.g. intact vs minimally processed) based on common food safety risks. A literature review was conducted focusing on produce-related pathogen outbreaks in Canada. English and French references published between 1990 and 2020 were considered and extracted using academic search engines (e.g. PubMed, Google Scholar) and government sources (e.g. Public Health Agency of Canada's Publically Available International Foodborne Outbreak Database (PAIFOD)). Following this, the proposed categorization includes (i) fruiting, root and stem vegetables, (ii) cruciferous and leafy vegetables, (iii) fresh leafy herbs, (iv) tender flesh and pome fruits, (v) berries and small fruits, and (vi) fungi and sea vegetables. An expert elicitation will follow to determine the source attribution at the sub-product level for the most significant (based on DALYs) pathogen-FFV combinations. This new categorization adds a layer of granularity to the model to better assess risk within FFV establishments, aiding regulatory oversight and public health policy.

Biography:
Elisabeth Mantil completed her PhD in 2018 from Carleton University's Department of Chemistry, concentrating in Food Science and Nutrition. She held a Mitacs Science Policy Post-doctoral Fellowship position with the CFIA's Establishment-based Risk Assessment (ERA) team from 2018-2019. She is currently a science analyst with the ERA team.

Presenting Author Details:
Full name: Elisabeth Mantil
Contact number: 1-613-773-5601
Twitter account: @daselisa
Linked In account: www.linkedin.com/in/elisabeth-mantil-922b2aa4

Session name/ number: 17-2 Microbiology Research and Policy Environments
Category: Oral presentation