

# Risk assessment modeling for other produce categories

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# Published studies

- Montville, R. I. and Schaffner, D.W. 2005. Monte Carlo simulation of pathogen behavior during the sprout production process. *Applied and Environmental Microbiology*. 71(2): 746–753.
  - Focused on risk reduction during production
- Duffy, S and Schaffner, D.W. 2002. Monte Carlo Simulation of the Risk of Contamination of Apples with *Escherichia coli* O157:H7. *International Journal of Food Microbiology*, 78(3): 245-255.
  - Featured flying cows
- A. J. Hamilton, F. Stagnitti, R. Premier, A. M. Boland, and G. Hale. Quantitative microbial risk assessment models for consumption of raw vegetables irrigated with reclaimed water. *Appl. Environ. Microbiol.* 72 (5):3284-3290, 2006.
  - Models for risk of virus infection from raw vegetables overhead irrigated with nondisinfected secondary treated reclaimed water
- L. J. Robertson, J. D. Greig, B. Gjerde, and A. Fazil. The potential for acquiring cryptosporidiosis or giardiasis from consumption of mung bean sprouts in Norway: a preliminary step-wise risk assessment. *Int.J.Food Micro.* 98 (3):291-300, 2005.
  - Survey found sprouts likely contaminated with *Cryptosporidium* and *Giardia*. Simple risk assessment initiated to demonstrate to public health officials that this might be a risk warranting further attention

# IFT Risk Ranking

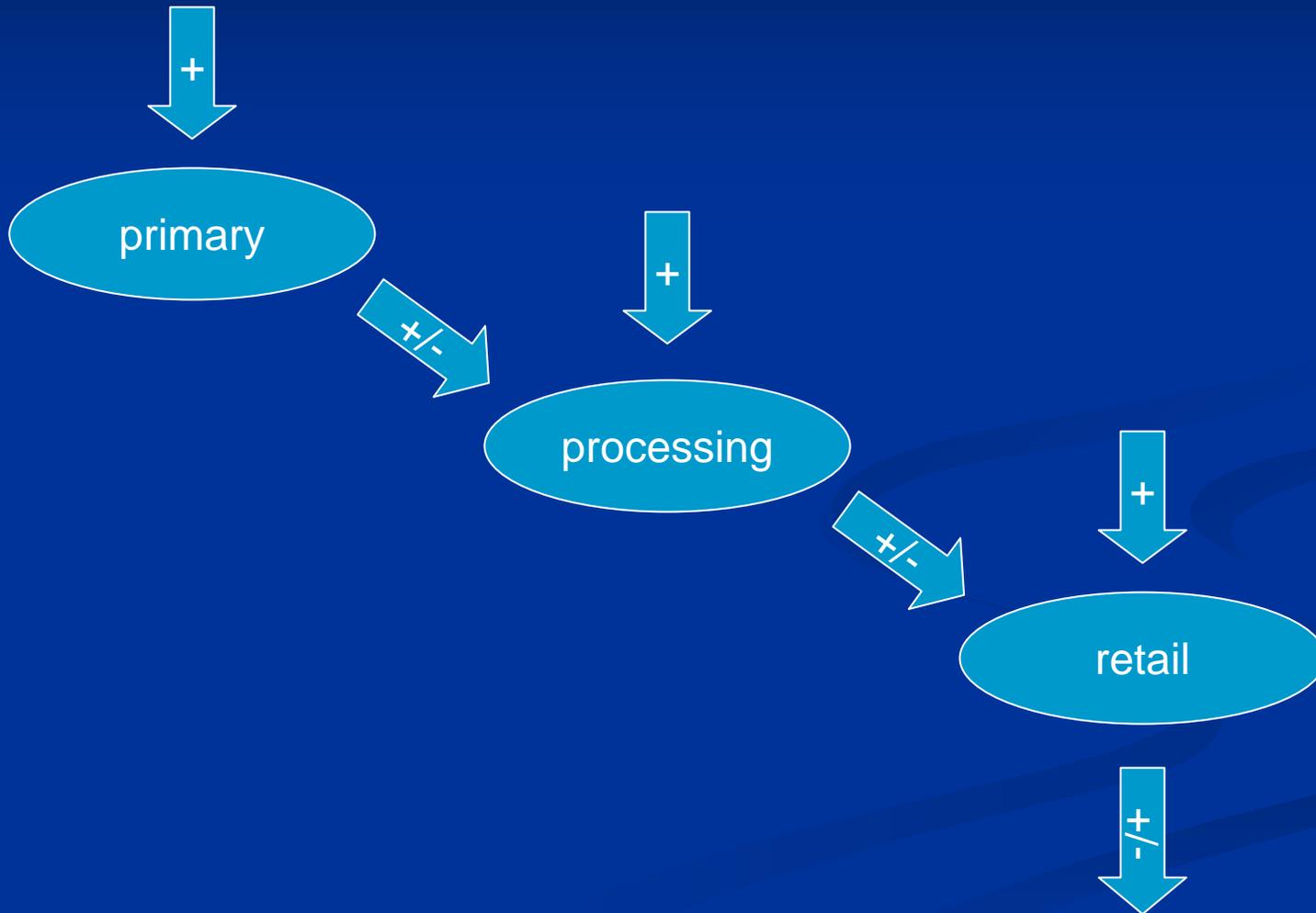
- The primary purpose of the model is to provide:
  - Rapid, flexible tool
  - Ranking the relative risk of chemical and microbial hazards
  - Food products regulated by the FDA

# How is the model structured?

- Both by commodity and by hazard
  - Link hazard to commodity or commodity to hazard
- The entire food production system is divided into several broadly defined sections, where prevalence and concentration of the hazard can change
  - Primary production
  - Processing
  - Distribution and retail
- Model is implemented on the web and in Analytica



# IFT FDA Overview



# Strategies

- Bottom up
  - RFF, FSRC
- Top down
  - IFT/FDA
- Partial pathways
  - Sprouts, Almonds
- Expert opinion or assumptions to plug data gaps
  - Cider

# Motivation

- Nobody made a greater mistake than he who did nothing because he could do only a little.
  - Edmund Burke
- If people never did silly things, nothing intelligent would ever get done.
  - Ludwig Wittgenstein
- All you need in this life is ignorance and confidence; then success is sure.
  - Mark Twain
- A facility for quotation covers the absence of original thought.
  - Dorothy L. Sayers