

Current Risk Management
Policy Questions
about *Salmonella* in Eggs

What is risk assessment?

- An estimation of the likelihood of adverse effects that may result from exposure to specified health hazards or from the absence of beneficial influences.
- FSIS's *Salmonella* risk assessments:
 - Are comprehensive quantitative models
 - Characterize public health effects associated with the consumption of *Salmonella* Enteritidis-infected (SE) shell eggs and *Salmonella* spp. adulterated egg products

What is a Risk Management Question?

- A risk management question is:
 - A question
 - Asked by managers
 - Who foresee developing policies
 - That would benefit from risk assessment support
- FSIS risk managers are interested in developing policies that will reduced the risk of human illness from SE in shell eggs and *Salmonella* in egg products

Why is FSIS interested in reducing
the risk of illness from SE and *Salmonella*?

- Humans can contract *Salmonella* from eating contaminated shell eggs and egg products.
- 1976-1995:
 - 8-fold increase in reported SE infections
 - 75% associated with foods containing undercooked eggs

FSIS Draft Risk Assessments of SE in Shell Eggs and *Salmonella* spp. in Egg Products

- Purpose of the assessments:
 - To assist FSIS in evaluating risk management options for developing shell egg and egg product performance standards intended to significantly reduce the risk of illnesses from SE in shell eggs and *Salmonella* spp. in egg products

Rationale for Focusing on SE in Shell Eggs vs. *Salmonella* spp. in Egg Products

- Most cases of foodborne salmonellosis in the U.S. are associated with shell egg consumption

- Predominant *Salmonella* serotype in shell eggs is SE; transovarian transmission
- Contaminated egg products, however, include a variety of *Salmonella* serotypes, in addition to SE
 - Partly due to *Salmonella* on the egg shell, equipment, and other environmental sources that may contribute to contamination

Risk Management Questions
Salmonella Enteritidis in Shell Eggs

Risk Management Question 1

- What is the number of illnesses per serving and annual number of illnesses from *Salmonella* Enteritidis cells in pasteurized and non-pasteurized shell eggs?

Risk Management Question 2

- What is the effect of the temperature and length of time (in days) before eggs are collected after they are laid by the hen and then refrigerated and further processed on the estimated risk of illness?

Risk Management Question 3

- What is the number of *Salmonella* Enteritidis cells in shell eggs before and after a specified pasteurization scenario?

Risk Management Questions
Salmonella spp. in Egg Products

Risk Management Question 1

- What is the number of illnesses per serving and annual number of illnesses from *Salmonella* spp. in pasteurized egg products (e.g., liquid whole eggs, yolks, and egg whites)?

Risk Management Question 2

- What is the number of *Salmonella* spp. cells in a liter of egg product (whole, yolk, albumen) before and after a specified pasteurization scenario?

Where can you find FSIS's
draft risk assessments?

On the FSIS web site at:

http://www.fsis.usda.gov/Regulations_& Policies/2004_Notices_Index/index.asp#Risk_Assessments