



# What is Food Safety and Why is it Important?

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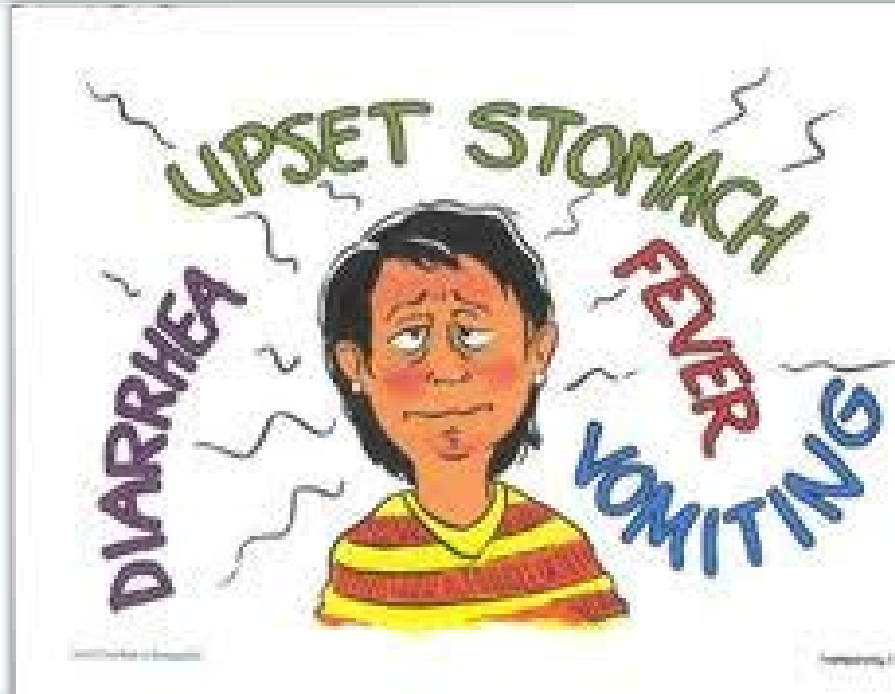
United States Department of Agriculture

National Institute of Food and Agriculture

# What is Food Safety?

**Food safety** is a scientific discipline describing handling, preparation, and storage of **food** in ways that prevent foodborne illness. This includes a number of routines that should be followed to avoid potentially severe health hazards.





What causes people to get sick?



# Three Types of On-Farm Contamination

Biological, chemical, physical

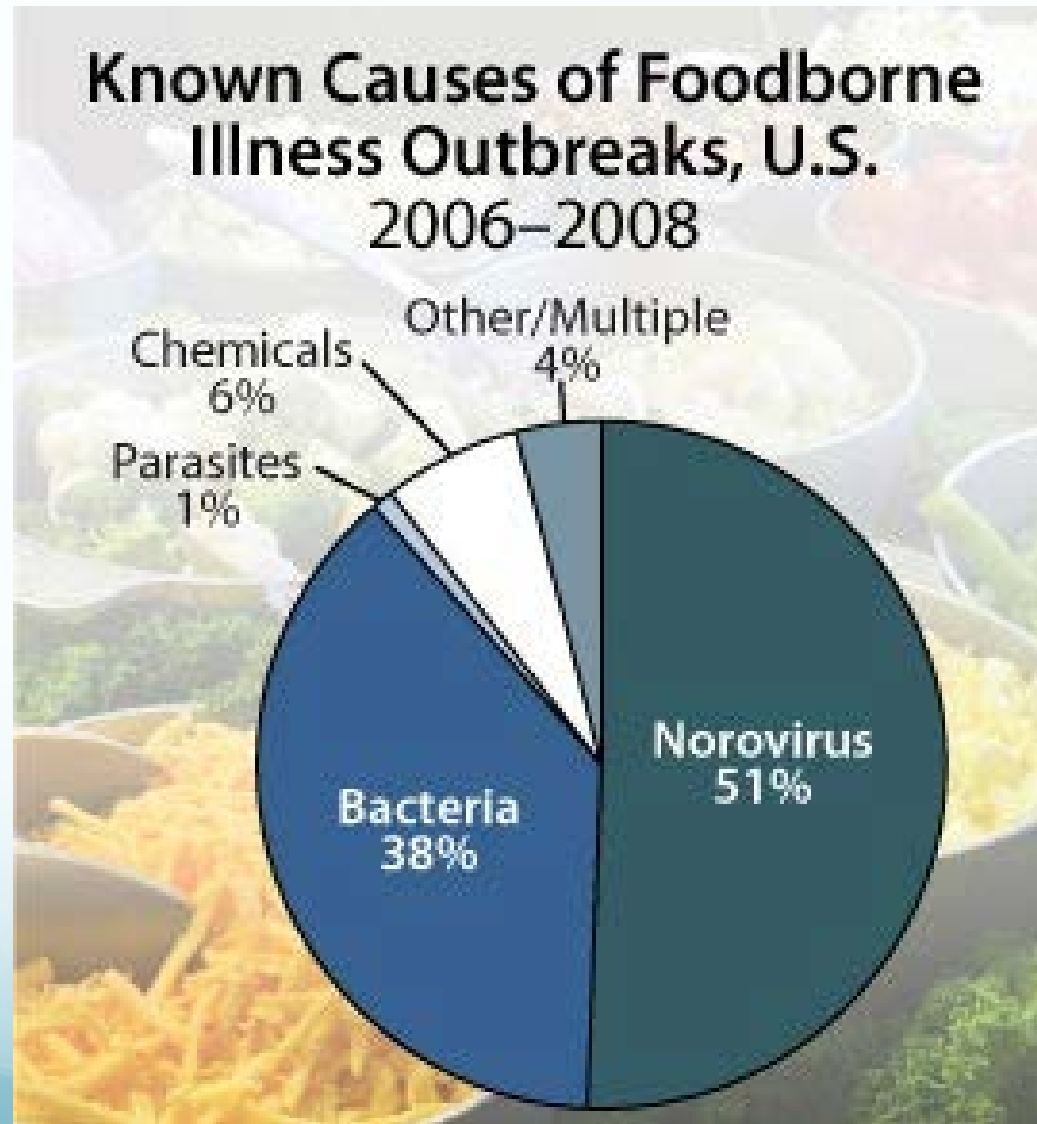


# Foodborne Illness Outbreaks

- About 48 million people (1 in 6 Americans) get sick each year, 128,000 are hospitalized, and 3,000 die from foodborne diseases, (CDC).

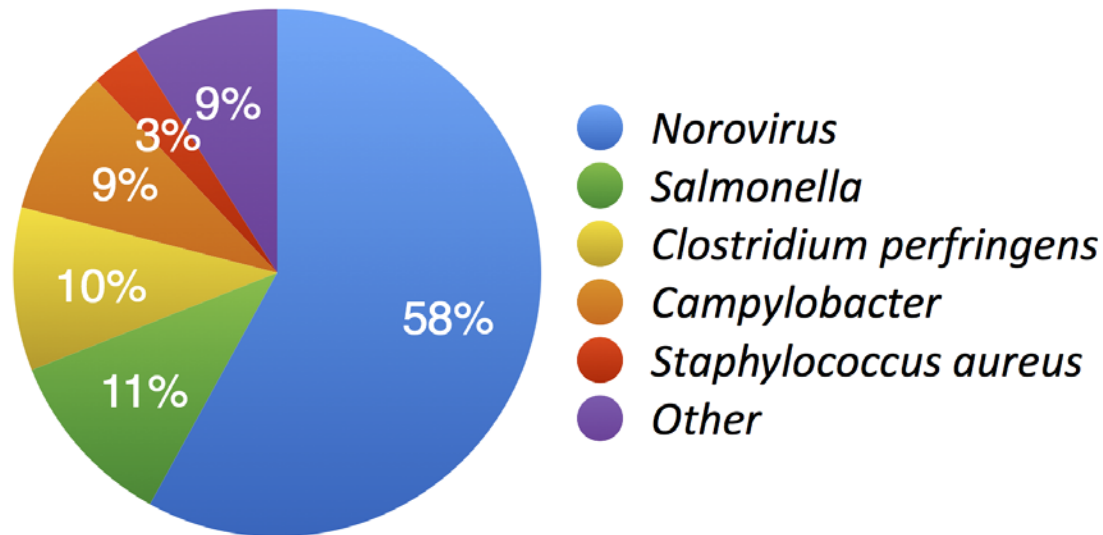


# Primary Causes of Illness - CDC



# Norovirus sickens the most people

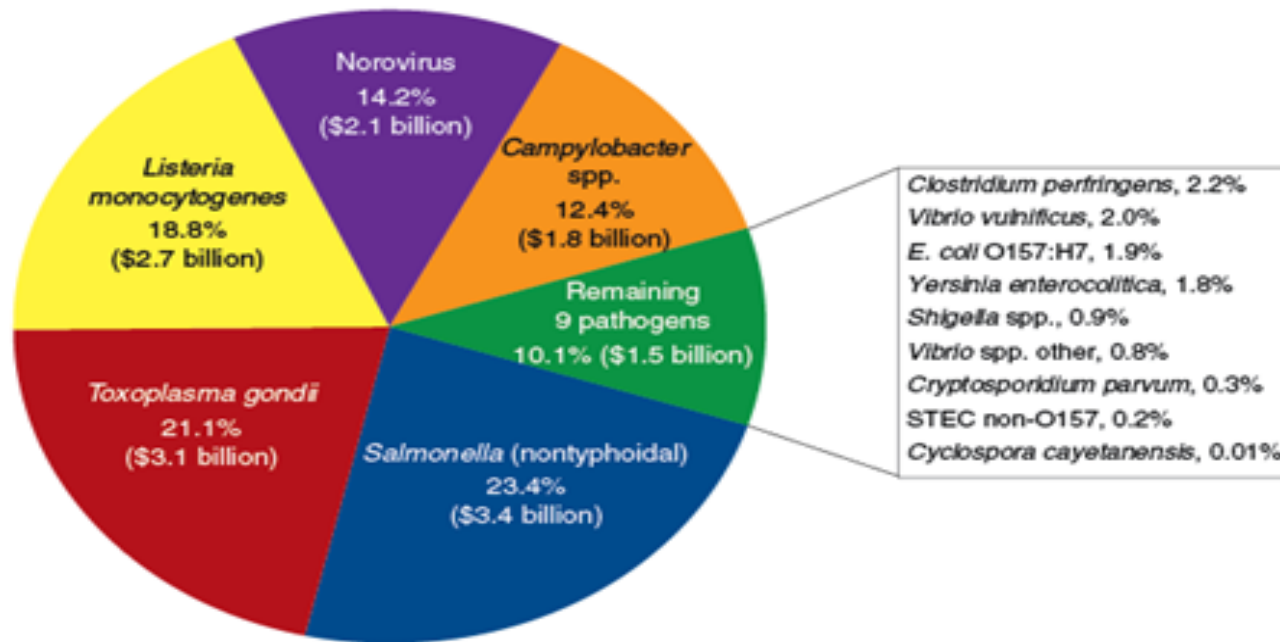
**Foodborne Illness in the U.S., by Pathogen**





# Salmonella, Norovirus, imposes greatest cost (hospitalization, death)

Salmonella imposes the greatest cost of the 14 major foodborne pathogens



Note: Annual cost estimates are in 2010 dollars based on disease incidence estimates published in 2011.

Source: USDA, Economic Research Service.

Outbreaks linked to contact with live poultry have increased in recent years as more people keep backyard flocks. In 2016, a record number of illnesses were linked to contact with backyard poultry (895 infected, 209 hospitalized, 4 deaths)



# Which is best?



# HANDWASHING IS BEST!

- Washing hands well and often is the most important thing you can do to prevent **germs (bacteria, viruses, fungi)** from leading to infections and sickness.
- Hand sanitizers **do not** kill some common germs such as salmonella, e. Coli, MRSA (methicillin-resistant staphylococcus aureus) and [norovirus](#). - CDC



# Contamination in the Field: Small Strawberry Farm

- Locally grown berries in NW Oregon, 2011
- Strawberries tainted with E. coli O157:H7 Sicken 14, One Dies
- Sold at U-pick, farm stands, farmers markets
- High concentration of deer feces



# Some outbreaks associated with infected workers

Date	Produce	Pathogen	# of cases	Produce origin
1987	raspberries	Hepatitis A virus	92	United Kingdom
1990	strawberries	Hepatitis A virus	53	United States
1994	green onions	Shigella	72	CA
1996	leaf lettuce	E. coli O157:H7	49	United States
1997	strawberries	Hepatitis A virus	250	CA
1997	green onions	Cryptosporidium	55	United States
1997	basil	Cyclospora	341	United States
1998	green onions	Hepatitis A virus	43	United States/CA
1999	parsley	Shigella	486	United States
2003	parsley	enterohemorrhagic E. coli	77	United States



# Summary: Why is food safety important?

- We do not want our customers to get sick.
- Fresh fruit and vegetable consumption has grown significantly
- Rise of foodborne illness (*Salmonella*, *E. coli* O157:H7; *Shigella*, *Listeria*)
- Protect reputation of urban farms
- Many buyers (schools, packing houses, grocery stores) are requiring farmers to have food safety programs.
- State legislation requiring food safety assurances

