



## 2011 FLL CHALLENGE

### FLL FOOD FACTOR® TEAM ACTIVITY #1

# great food recalls in US history

## Introduction

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Foods can be recalled for a number of different reasons ranging from contamination (such as salmonella, botulism, listeria, e.coli and even lead) to incorrect labels (allergens such as nuts, soy, milk or wheat not noted on the label, for example) to improper preparation (fish not being eviscerated, for example).

## Background

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Food recalls are overseen by the Food and Drug Administration (FDA) or the US Department of Agriculture (USDA, for meat and poultry). More information about the FDA process is available at <http://www.fda.gov/downloads/ICECI/ComplianceManuals/RegulatoryProceduresManual/UCM074312.pdf>.

Food is recalled when contamination is suspected or illnesses are confirmed. Because food recalls are often voluntary and producers are interested in protecting their assets, finding the amount of food affected can be a challenge.

In this activity, your team will compare the size of the population affected by the recalls to the size of your team, your city or town, your state, and the entire country.

## PART I: GENERAL FOOD RECALLS

Some major recent food recalls have included:

- A. 380,000 pounds of Zemco Industries deli meat possibly tainted with listeria
- B. 1 million pounds of Modesto's Valley Meat Company ground beef tainted with e.coli
- C. 546,000 pounds Fairbanks Farms ground beef tainted with e. coli
- D. 54,960 pounds Jennie-O ground turkey tainted with drug resistant salmonella

## Understanding the Data

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To learn more about the scale of these recalls and the number of people actually affected, make graphs demonstrating the following:

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How many people are there in the US?

How many people in your state?

How many people in your city/town?

How many people in your school (students, teachers, staff)?

How many students in your grade?

How many students on your team?

How many people were affected by food recalls A, B, C and D? Note: For meat recalls, assume that a 1/3 pound portion serves one person.

## **PART II: EGG RECALL**

### **Background**

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On August 19, 2010, The New York Times reported an egg recall expanding to 380 million eggs after an outbreak of salmonella that sickened people across the country. The outbreak was noticed when the Center for Disease Control in Atlanta, the national public health agency, noticed a rise in the average reported cases of Salmonella Enteritidis, a food-borne illness.

Between May 1 and November 30, 2010, the illnesses reported totalled 3,578 cases. Not all of these cases are necessarily a result of contaminated eggs. However, based on the previous 5 years of reports, the number of cases anticipated would normally be 1,639 for the same time frame. So based on this "normal" average number of illnesses, the change in data seems to indicate that 1,939 cases can be associated with the outbreak.

### **Understanding the Data**

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The increase in the Salmonella Enteritidis more than doubled for a few weeks in 2010. That is a huge increase, especially when we know the illness is preventable. So, once this significant increase is known, how do we know the best way to respond? How much of the egg supply was affected by this recall? Does this data mean that all egg production should stopped?

Create a graph to show the relationship between the number of eggs produced in the United States annually and the number of eggs affected by the recall.

1. How many hens lay eggs each year in the U.S.?
2. How many eggs are laid by each hen?
3. What is the total number of eggs produced in a year in the United States?
4. Compare the number of eggs produced with the population of the US. How many eggs are consumed per person on average?
5. What is the relationship between the number of eggs produced in the US annually and the number of eggs affected by the recall?



## Discussion

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Based on your graphs, do you think the US food system is safe?

What could you do to make yourself safer?

Do you have any ideas that might help make our food supply safer?

## Resources

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[http://www.nytimes.com/2010/08/19/business/19eggs.html?\\_r=1&partner=rss&emc=rss](http://www.nytimes.com/2010/08/19/business/19eggs.html?_r=1&partner=rss&emc=rss)

[cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)

[http://www.cdc.gov/salmonella/enteritidis/epi\\_curve.html](http://www.cdc.gov/salmonella/enteritidis/epi_curve.html)

<http://www.incredibleegg.org/>

<http://buzz.yahoo.com/buzzlog/93962>

<http://www.nytimes.com/2009/01/23/health/23scare.html>

<http://www.fda.gov/Safety/Recalls/default.htm>

<http://abcnews.go.com/GMA/OnCall/beef-recall-ecoli-contamination-fear-prompts-ground-beef/story?id=8970713>

[http://www.fsis.usda.gov/News\\_&\\_Events/Recall\\_028\\_2011\\_Release/index.asp?s\\_cid=w\\_c\\_sms\\_cont\\_001](http://www.fsis.usda.gov/News_&_Events/Recall_028_2011_Release/index.asp?s_cid=w_c_sms_cont_001)

## Just For Coaches

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Here are the numbers required for graphing. You may have your team research the numbers or you may provide them.

The US population is available at <http://www.census.gov/main/www/popclock.html>.

- A. 380,000 pounds of Zemco Industries deli meat possibly tainted with listeria = up to 1,140,00 people affected
- B. 1 million pounds of Modesto's Valley Meat Company ground beef tainted with e.coli = up to 3 million people affected
- C. 546,000 pounds Fairbanks Farms ground beef tainted with e. coli = up to 1,638,000 people affected
- D. 54,960 pounds Jennie-O ground turkey tainted with drug resistant salmonella = up to 164,880 people affected

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1. How many hens lay eggs each year in the U.S.? [280 million]
  2. How many eggs are laid by each hen? [250-300]
  3. What is the total number of eggs produced in a year in the United States? [75 billion or 10% of the world's supply]
  4. Compare the number of eggs produced with the population of the US. How many eggs are consumed per person on average?
  5. What is the relationship between the number of eggs produced in the US annually and the number of eggs affected by the recall? [380 million eggs recalled 75 billion total eggs produced = 0.0051 % ]