

# Biosecurity Unit

## Lesson #1

### Title Of Lesson:

*Introduction Video  
FSIS (Food Safety  
Inspection Service)*

Ct/Course/Grade: Ag Science

### Standards:

1. Identify methods used in developing a traceback system.
2. Read and analyze a foodborne illness outbreak report.
3. Answer questions about the report and create a diagram of product movement.
4. Determine ways contamination risks could have been reduced.

### Main Concept:

- Highlights the importance of traceback in the production of fresh produce through the review of a real foodborne illness outbreak

### Students will understand/know...

#### ● Vocabulary

- **Contamination**-the unintended presence of potentially harmful substance including microorganisms in food
- **pathogen**-a microorganism that is infectious and causes disease
- **foodborne illness**- any illness resulting from the contamination of food by pathogenic bacteria, viruses, or parasites
- **product**-any menu item, ready-to-eat food
- **hygiene**-a set of practices performed to preserve health
- **food contact surface**-any equipment or utensils that normally comes in contact with food surfaces, sponges and other utensils
- **direct contact**- physical interaction between an infected person or animal and a susceptible person or animal
- **indirect contact**-occurs when there is no direct contact between a person and an animal. This contact occurs when a susceptible person or animal is exposed to contaminated air, objects, fecal-oral matter, or insects
- **Outbreak**—an incident in which two or more people experience the same illness after eating the same food
- **Traceback**—ability to identify the origin of any food product and all subsequent handling events as food travels through the food system
- **Clean**-wash hands and surfaces often

Show introduction video "Food Safety and Inspection Service."

Background: USDA's Food Safety and Inspection Service (FSIS) ensures that our nation's meat, poultry and processed egg supply is wholesome, safe and properly labeled. Through prevention-based policies and practices USDA is meeting the foodborne challenges of the 21st century head on and using science to craft the best ways forward. Ensuring processing plants, factories, etc.. are in compliance with rules and regulations. Help keeps you safe!

## **Activity**

### Materials Needed

1. Glo Germ™ powder.
2. Minimum of two bags of beef jerky

### Safety Procedures

- Do not sniff or drink solution
- If participant is exposed to solution, flush the area immediately with water

Take one bag of beef jerky and place a small amount of Glo Germ™ powder in the bag – shake until powder disappears and it is evenly distributed. Place bag with another unadulterated bag so students do not know which bag has been changed. Alternatively, bring in two bags of ready-to-eat beef jerky with different expiration dates.

The FDA has issued a recall of the bagged salad involved in a foodborne illness outbreak. How can we tell which bagged salad products were affected by this outbreak?

What information does the FDA supply to the public to help them identify the contaminated food when there is a recall? Answer: lot numbers, dates, and other information found on the consumer package.

Have students in the class take a vote on which bag is contaminated. Tell students that you "contaminated" one of the bags with Glo Germ™ powder. Using the black light, show the students the bags. The simulated contamination will glow. In reality, contaminated food does not glow under a black light, so the FDA provides information for package identification when it issues a recall.

### Monitoring and Feedback:

- Students will evaluate the spread of food borne illness through contamination
- Determine ways contamination risks could have been reduced.

### Learning Activities:

Introductory Food Safety and Inspection Video (2:30 minutes)

The pre-assessment is given before the unit begins (5-10 minutes)

Introduce vocabulary, give background (10 minutes)

Food safety activity (10 minutes)

Post activity discussion and questions (20 minutes)

## RESOURCES

Purdue University extension