

## **Sprouts – A special problem**

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# Sprouts - a Special Problem

## NACMCF Produce White Paper 1998

- The National Advisory committee on Microbiological Criteria for Foods has published two white papers of relevance here. The first paper was Microbial Safety Evaluations and Recommendations for all fresh produce. In that paper, NACMCF identified sprouts as a special problem.



# Sprout Outbreaks 1996 - 2004

- Since 1996, FDA has responded to 27 outbreaks of foodborne illness associated with raw or lightly cooked sprouts.
- The following slide shows the year, followed by total number of outbreaks associated with sprouts in parentheses, followed by the number of outbreaks associated with different sprout types, alfalfa, clover, and mung bean sprouts. The last column is the number of reported illness or cases involved in outbreaks.
- It's important to know that Sprouts account for 40 % of all foodborne illness outbreaks associated with fresh produce and about 20 % of all illnesses.

# Sprout Outbreaks 1996 - 2004

	Alfalfa	Clover	Mung Bean	Cases
1996 (2)	1	1		650
1997 (3)	3	1		277
1998 (3)	3	1		48
1999 (6)	5	2		389
2000 (1)	-	-	1	75
2001 (3)	1		2	88
2002 (2)	1		1	21
	(5)	5		52
	(2)	2		33

# NACMCF Sprout White Paper

- Seeds are the most likely source of microbial contamination.
- Damaged or scarified seed may increase the risk of internalization of pathogens and make disinfection more difficult.
- 5-log seed disinfection treatment should be applied to seed before sprouting

# FDA's Sprout Guidance

## October 25, 1999

- In October, 1999, FDA released final guidance for sprouts; a broad guidance document with key recommendations to minimize food safety hazards for seeds and sprouts; and a companion document to provide additional details on implementing one of the recommendations in the broad guidance, i.e., microbial testing of spent irrigation water.



<http://vm.cfsan.fda.gov/~dms/sprougd1.html>

<http://vm.cfsan.fda.gov/~dms/sprougd2.html>

# Sprout-related outbreaks

<http://bites.ksu.edu/sprouts-associated-outbreaks>

Feb. 2012	<i>E. coli</i> O26	29	Raw clover sprouts at Jimmy John's restaurants is the likely cause of this outbreak
May-Jul. 2011	<i>E. coli</i> O104:H4	4,321 (50 deaths and 852 HUS cases)	Bean sprouts
2009	<i>Salmonella</i> Saintpaul	235	Raw alfalfa sprouts
2005	<i>Salmonella</i> spp.	648	Mung sprouts

# *E. coli* O104:H4 in Germany

- 53 deaths
- 4,321 illnesses
- 852 cases of HUS
- would auditors have noted seed source as potential risk
- would auditors say, don't serve sprouts





- Alfalfa sprouts grown in Illinois sickened at least 140 people in 23 states with salmonella beginning Nov. 2010, and many of those sick ate the sprouts on Jimmy John's sandwiches
- On Jan. 3, 2011, in a separate outbreak, health officials fingered clover sprouts produced by Sprouters Northwest, Inc. of Kent, Wash. as the source of a salmonella outbreak that sickened three in Oregon and four in Washington; the vehicle in at least some of the illnesses was Jimmy John's sandwiches with sprouts.
- In mid-Jan. 2011, John Liautaud, the owner of the Jimmy John's sandwich shop chain, said his restaurants will be replacing alfalfa sprouts with allegedly easier-cleaned clover sprouts, effective immediately.



- U.S. Food and Drug Administration inspected the Sprouter's Northwest facility and found:
  - Failure to take necessary precautions to protect against contamination of food and food contact surfaces with microorganisms and foreign substances;
  - Failure to clean food-contact surfaces as frequently as necessary to protect against contamination of food;
  - Failure to clean non-food-contact surfaces of equipment as frequently as necessary to protect against contamination;
  - Effective measures not being taken to protect against contamination of food on the premises by pests;

- Failure to properly store equipment, remove litter and waste, and cut weeds or grass that may constitute an attractant, breeding place or harborage area for pests, within the immediate vicinity of the plant, building, or structures;
- Failure to maintain buildings, fixtures, or other physical structures in a sanitary condition;
- Failure to hold raw materials in bulk or suitable containers so as to protect against contamination; and,
- Failure to maintain buildings and physical facilities in repair sufficient to prevent food from becoming adulterated.



The original table of North American raw sprout-related outbreaks is available at <http://bites.ksu.edu/sprout-associated-outbreaks-north-america>.

# Sprouts in Emirates lounge

- Were suppliers questioned?
- Is source of seeds known?
- Do auditors recommend not serving raw sprouts?
- Table of sprout-related outbreaks <http://bites.ksu.edu/sprouts-associated-outbreaks>



# Would you eat here?

- customer complains a sandwich chain no longer serves sprouts
- employee finds [barfblog.com](http://barfblog.com) looking for answers, reads about handwashing
- notices co-workers rarely wash hands
- employee training, corporate manual have nothing on handwashing



# Would you eat here?

- corporate auditor recently removed handwashing sign provided by state because it was visible to customers and not approved by corporate
- employees work in gloves, rarely changing or washing hands
- lettuce, tomatoes, mayo, deli meat left sitting on non-refrigerated cutting board portion of cold table where all customer food is prepared for up to an hour
- employee bugged supervisor, had staff meeting, brought to attention of corporate



# Sprout-related outbreaks

<http://bites.ksu.edu/sprouts-associated-outbreaks>



# Lessons learned?

- Food safety begins on the farm
- Biological systems, not conspiracies
- Systems are only as good as the weakest link
- Stop blaming consumers





# Produce food safety culture

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