Food Safety and Labelling Requirements in Ontario for Nut Industry

Sarah Martz and Linda Hill

Food Inspection Branch, OMAFRA

March 27, 2018

Outline

- Ontario Regulation 119/11
  - What it covers
  - Labelling and retail display sign requirements
  - Food safety requirements
- In-Shell Nut Outbreaks
- Major Hazards
  - Microbial – *Salmonella*, *E. coli*
  - Chemical – Aflatoxins
- Cross-contamination prevention
- Food safety monitoring program

What Legislation Applies

Non-Federally Registered Establishments

Provincial Legislation

- *Food Safety and Quality Act, 2001*
  - Ontario Regulation 119/11 Produce, Honey and Maple Products

Federal Legislation

- *Canada Agricultural Products Act*
- *Food and Drugs Act*
  - Food and Drugs Regulations
    - Contains regulations on the grading, packing and marking.
- *Consumer Packaging and Labelling Act*
  - Consumer Packaging and Labelling Regulations
    - Regulates the consistency, completeness, and accuracy of the labelling and packaging of consumer goods.

Ontario Regulation 119/11

- Regulates the packaging, labelling, transporting and advertising, and sale of any regulated commodity in Ontario.
- Regulated commodities include:
  - Produce
    - Fruit and vegetables (fresh)
    - Sprouts
    - Culinary herbs (fresh)
    - **Nuts (in-shell)**
    - Edible fungi (mushrooms - whole)
  - Honey
  - Maple Products

How are nut growers affected by O. Reg. 119/11?

- In-shell nuts and peanuts are regulated, but shelled nuts are not (still subject to Federal Regulations)
- The regulation contains food safety provisions.
- There are no grade requirements for nuts.
- There is a package suitability requirement but no standardized size requirements.
- There are requirements for labelling, retail display signs and advertisements for in-shell nuts.
- There are prohibitions against misrepresentation.

Labelling

- O. Reg. 119/11 requires in-shell nuts to be identified with specific information for labelling, signage and advertising.
- Labels on packages must include:
  - Name and full address of producer or packer
  - Country or province of origin
    - You must use one of the following phrases:
      - "Product of"
      - "Produce of"
      - "Grown in"
      - "Country of Origin"
  - The common name of the product if it cannot be easily identified through the packaging.
  - Net weight (*Consumer Packaging and Labelling Act*)
    - Metric (imperial can be in addition)

Labelling for Bulk Containers

- Bulk containers should have the same information as consumer ready packages
  - The common name of the product
  - Name and full address of producer or packer
  - Country or province of origin (i.e., Product of Ontario)
- Packages that are filled from labelled bulk containers do not need to be labelled

Advertising and Retail Display Sign Requirements

- Must be on or immediately over the display
- Country or province of origin
- Price per unit of weight in metric, if sold by weight (imperial can be used in addition)
- Print size – readily discernable and in reasonable proportions to the size of the sign

O. Reg. 119/11 - Food Safety

- O. Reg. 119/11 prohibits:
  - Selling, packing or transporting contaminated nuts.

CDC Home | Search | Health Topics A-Z

CDC

MMWR

Weekly

Use o

Esc

BEN

BRENDA M

[1]Minnesota D
Agriculture,
Madison, W
[6]Michigan D
Avenue, MS-7

their onsets of ill

Multistate

azelnuts

L F. KLOS,[4]
D KIRK E. SMITH[3]

Wisconsin Department of
Health, P.O. Box 2659,
sing, Michigan 48909;
ic Health, 1500 Capitol
Street S.E., Minneapolis,

Food Safety News

Breaking news for everyone's consumption

Home | Outbreaks | Food Recalls | Food Politics | Calendar | Subscribe | Directory | Media Kit

Salmonella outbreak traced to hazelnuts from Oregon farm

BY CORAL BEACH | JANUARY 7, 2017

Oregon officials are warning consumers to check their homes for hazelnuts from the Schmidt Farm and Nursery farm stand and to immediately discard them because they have been named the cause of a Salmonella outbreak.

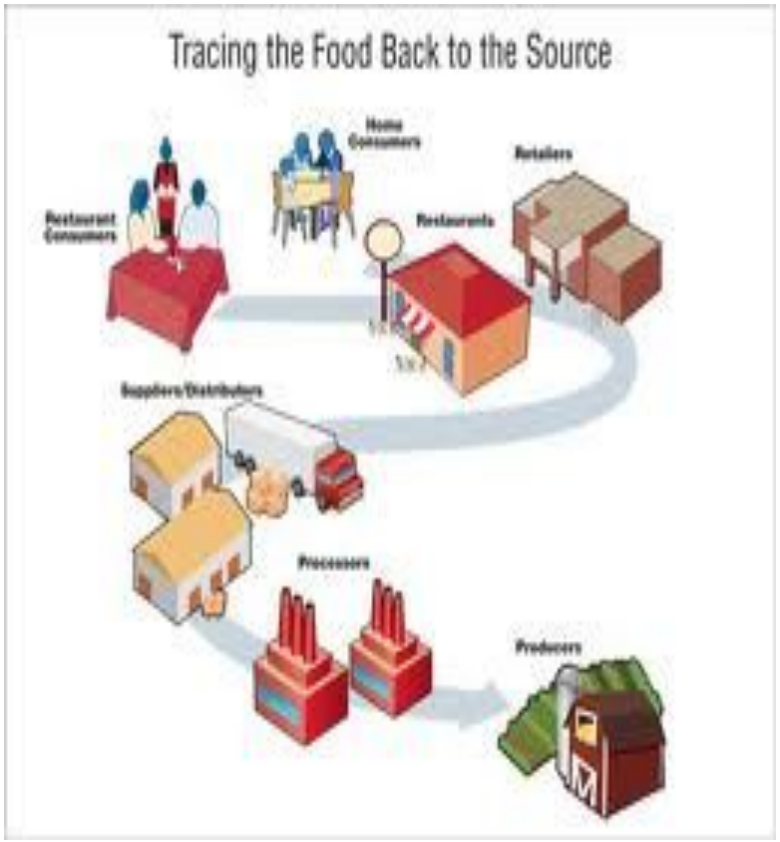
The warning Friday from the Oregon Health Authority Public Health Division reported five people have been confirmed in the outbreak of Salmonella Typhimurium. They were all infected with the same strain of the pathogen, which was also found in hazelnuts from the Schmidt Farm and Nursery farm stand on highway southwest of McMinnville, OR.

Although the majority of the Schmidt Farm hazelnut crop goes to wholesalers, a spokesman from the Oregon Department of Agriculture said Friday afternoon that the

2017 Outbreak: A Closer Look

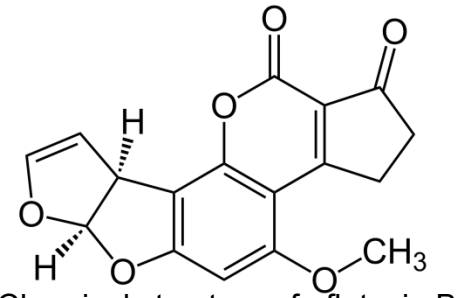
Trace back:

- *Salmonella* Typhimurium contaminated hazelnuts.
- 5 consumers were ill.
- After public health interviews with the patients, traced back to one farm.
- Testing on-farm confirmed hazelnuts were contaminated.
- Recall of over 177,000 pounds of product.

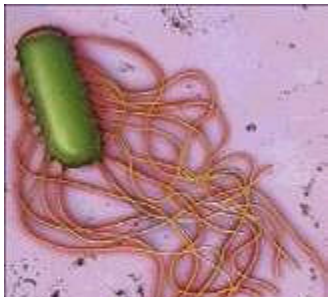


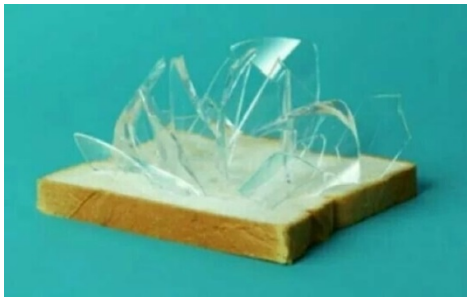
Three Major Food Safety Hazards

- Chemical
  - From crop protection, food allergens and aflatoxin.
- Biological
  - Microorganism contamination from bacteria (e.g., *E. coli*, *Salmonella, Listeria*), yeasts and moulds.
- Physical
  - Foreign materials such as stones, glass and metal.



Chemical structure of aflatoxin B_1





Chemical Hazard: Aflatoxin

- Toxic compound produced by mould (mycotoxins)
- Causes acute or chronic effects on humans and animals
  - Carcinogen (cancer causing)
- Usually comes from crop debris and soil, but harvest/post-harvest practices can significantly increase aflatoxin levels
  - E.g., improper storage
- Health Canada limit 15 ppb
- Prevention is key:
  - Dry nuts ASAP
  - Keep/store nuts at the right moisture levels
  - Avoid postharvest rehydration
  - Follow good agricultural practices (manure and irrigation practices)

Microbiological Hazards

- *Salmonella* and *E. coli* have been linked to illness from consumption of tree nuts.
  - Both can cause illness even at very low levels.
- There is evidence that *Salmonella* can live for days to weeks and *E. coli* O157:H7 can live up to 3 months or more on in-shell nuts.
- Potential sources: orchard ground, contaminated irrigation water (or water introduced during further processing), moisture in storage facility.
- Preventing cross-contamination is important, starts with Good Agricultural Practices (GAPs), continues with Good Manufacturing Practices (GMPs).
  - GAPs and GMPs are defined as a collection of practices to apply to on-farm production and post-production processes resulting in safe and healthy food.

Good Agricultural Practices (GAPs)

- Documentation
  - Should have traceability program
- Employee training
  - Worker hygiene
  - GAP principles
- Water quality
  - Irrigation and wash water
- Orchard Floor Management
  - Usually direct contact of nuts with orchard floor
    - Pest control through minimizing habitat/nesting areas
- Harvest and transportation practices
  - Clean and sanitize harvest equipment and ensure clean dry storage area

Adapted from Nut Industry Guidebook Addendum III

Good Manufacturing Practices (GMPs)

- Process controls to prevent contamination during production.
- Receiving and handling practices
- Cleaning and sanitation of building, equipment, utensils, containers.
- Sanitary design of facility to prevent cross contamination (separating the clean and dirty side).
  - Preventative maintenance
- Pest control
- Personnel
  - Personal hygiene and health requirements.
  - Cleaning and Sanitation Training.
- Storage/transportation practices

Resources

- OMAFRA
  - Hazelnuts in Ontario - Growing, Harvesting and Food Safety
  - Food Safety Monitoring Program for Foods of Plant Origin
- Food and Agricultural Organization of the UN and the World Health Organization Publication:
  - Preventing *Salmonella* and *E. coli* in tree nuts.

OMAFRA'S Food Safety Monitoring Program

Sampling of in Shell Tree Nuts

What is OMAFRA's Food Safety Monitoring (FSM) Program?

- Samples of Ontario grown, foods of plant origin are collected from various points of sale across the province. Samples include;
  - Fruit and vegetables
  - Edible fungi (mushrooms)
  - Sprouts
  - Honey
  - Maple syrup
  - Nuts

- Commodities considered are selected based on risk

Sample types

- Samples are collected by Appointed Inspectors with the authority under the *Food Safety and Quality Act*, 2001
- As part of this program, inspectors randomly collect samples of Ontario grown in-shell edible tree nuts
- Varieties of nuts collected may include;
  - Hazelnuts
  - Chestnuts
  - Heartnuts
  - Walnuts
  - Pecans

Sample breakdown

- In order to get a true representation of the product lot, 5 individual samples are collected

- Each of these samples are 400 grams totalling 2 kg

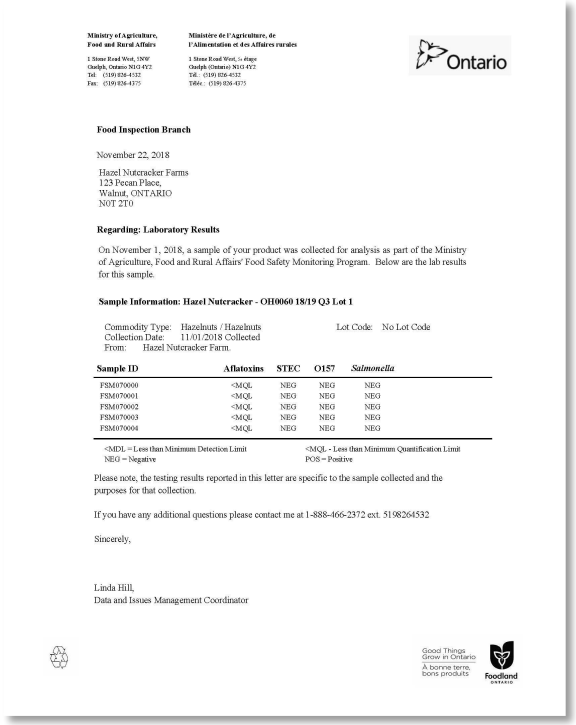
Lab analysis

Samples are tested for *E.coli*, *Salmonella* and Aflatoxins at the University of Guelph, Agri-Food Laboratory

- Each sample is given a unique sample ID
- This ID links the sample to the producer to keep producer information confidential

Lab results

- Compliant lab results are mailed to the producer within 15 -20 business days
- In the event there is an adverse result, the producer is immediately notified



Ministry of Agriculture, Food and Rural Affairs
1 Stone Road West, 1NW
Guelph, Ontario N1G 4Y2
Tel. (519) 826-4532
Fax. (519) 826-4775

Ministère de l'Agriculture, de l'Alimentation et des Affaires rurales
1 Stone Road West, 1e étage
Guelph (Ontario) N1G 4Y2
Tél. : (519) 826-4532
Téléc. : (519) 826-4775

Ontario

Food Inspection Branch

November 22, 2018

Hazel Nutcracker Farms
123 Pecan Place,
Walnut, ONTARIO
N0T 2T0

Regarding: Laboratory Results

On November 1, 2018, a sample of your product was collected for analysis as part of the Ministry of Agriculture, Food and Rural Affairs' Food Safety Monitoring Program. Below are the lab results for this sample.

Sample Information: Hazel Nutcracker - OH0060 18/19 Q3 Lot 1

Commodity Type: Hazelnuts / Hazelnuts — Lot Code: No Lot Code
Collection Date: 11/01/2018 Collected
From: Hazel Nutcracker Farm.

Sample ID	Aflatoxins	STEC	O157	*Salmonella*
FSM070000	<MQL	NEG	NEG	NEG
FSM070001	<MQL	NEG	NEG	NEG
FSM070002	<MQL	NEG	NEG	NEG
FSM070003	<MQL	NEG	NEG	NEG
FSM070004	<MQL	NEG	NEG	NEG

<MDL = Less than Minimum Detection Limit
NEG = Negative
<MQL - Less than Minimum Quantification Limit
POS = Positive

Please note, the testing results reported in this letter are specific to the sample collected and the purposes for that collection.

If you have any additional questions please contact me at 1-888-466-2372 ext. 5198264532

Sincerely,

Linda Hill,
Data and Issues Management Coordinator

Good Things Grow in Ontario
À bonne terre, bons produits
Foodland Ontario

Follow up

- Additional information may be obtained regarding the sample lot
- A Risk Management Specialist is assigned and will conduct a follow up visit
  - Assist to help identify cause
  - Suggest corrective action to mitigate food safety risk
- The Canadian Food Inspection Agency may also be notified

2018 season

- 50 samples will be collected this fall
- Depending on operation size, two different nut varieties may be collected

What's in it for me?

- Increased confidence in product
- Contribute to improving food safety for Ontarians
- Compliance with Food Safety Legislation

Questions

For further information, please contact:

Sarah Martz
Risk Identification and Management Coordinator
519-826-4655
sarah.martz@ontario.ca

Linda Hill
Data and Issues Management Coordinator
519-826-4532
Linda.hill@ontario.ca