



Department of
Primary Industries

Sprouting on: food safety regulation of sprouts in Australia and where to next

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Sprouts as a high risk food

- Recognised internationally as a high risk commodity
- Codex guidelines
 - Code of Hygienic Practice for Fresh Fruit & Vegetables

The nightmare scenario...

Germany 2011

E. coli in fenugreek seed sprouts

- 3900 people affected
- 800 Haemolytic uraemic syndrome
- 53 deaths

Massive trade implications



Sprout food safety: Australian context



Geography & demographics



- 6 States and 2 Territories
- ~520,000 directly employed in agribusiness and food sector
- 4.1 million cases of foodborne illness each year (est.)
- 24 million people (7.7 million New South Wales)

Legislative framework and philosophy

“Australia is in an excellent position to build on its strengths and continue developing its systems for health security. This will, however, require continued adoption of modern surveillance, prevention and control methods and approaches, including modern epidemic intelligence and community communication approaches, as they become available.”

World Health Organization (2018) *Joint external evaluation of IHR core capacities of Australia*

- A clear focus on the protection of public health and safety
- Transparent processes
- Adopts Codex principals of risk analysis
- Roles and responsibilities understood
- Enables collaboration
- *Model Food Act* - wide definition of ‘sale’
- FSC Chapter 3 Food Safety Standards
- FSC Chapter 4 Primary Production Standards

Sprout food safety regulation in Australia

- National Primary Production Standards
- Developed by Food Standards Australia New Zealand (FSANZ)
 - Consultation with state regulators, industry
- Std 4.2.6 Production and Processing for Seed Sprouts
 - Enforceable from 2011
 - Outcome-based standard

NSW Food Authority overview

- Statutory authority established under the *NSW Food Act 2003*
- Ensure that food produced in NSW is safe and suitable for human consumption and correctly labelled
- Through-chain food regulator and single point of contact in NSW on food safety for health, industry, local government and community
- Provides the regulatory framework for the food industry in NSW
 - Australia New Zealand Food Standards Code
 - *NSW Food Act 2003*
 - Food Regulation 2015
- Sits within the Biosecurity & Food Safety Branch, Department of Primary Industries

Annual interactions for NSW

Function	Interactions	Activity
Licensing	14,500 food businesses	Issuing, renewing, invoicing, reminder actions, permissions, business details, reports and letters
Helpline	36,000	Respond to industry and consumer calls, complaints, enquiries, reports and letters
Compliance	10,000 audits/inspections	Planning, recording results, invoicing, reports and letters
Enforcement	1,000 investigations	Breaches, sanctions, evidence, prosecution sets, charges, invoicing
Food poisonings	500+ investigations	Planning, recording results, reports and letters
Name and Shame	1300 penalties	Business details
Third party audits	1,000 facilities	Reports from 54 approved third party auditors
FSS Certificates	66,000 (since 2011)	Completion of food safety supervisor training with a registered training authority, RTO approvals

NSW sprout food safety scheme

- Picks up national food safety requirements
- Must be licensed
 - 10 growers in NSW (small – large scale)
- Address risks through a food safety program
 - Guidance document for development of a HACCP-based food safety program
- Comply with testing requirements in NSW Food Safety Schemes Manual
 - Positive detections reported with 24 hours

NSW testing requirements

Product to be tested	Test to be conducted	Limit	Frequency
Seed used for sprouting (pre-screening test)	<i>Salmonella</i> Method: 1L sample of spent irrigation water from a test bath of seeds made up of 3kg taken evenly across the batch	Not detected in 100 mL	Every delivery batch of seeds
Spent irrigation water used for seed sprouting	<i>Salmonella</i> Method: 1L composite sample taken evenly across each sprouting container from each production batch. Irrigation water should be sampled just before harvest or at least 48 hrs after lay.	Not detected in 100 mL	Every 10 batches
Seed sprouts (finished product)	<i>E. coli</i> & <i>Salmonella</i> Method: 1 x 100g sample of any finished single sprout-type from each process line	Not exceeding 100 /g	Every 10 batches

Sprout related safety issues – recent history

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Salmonella warning after seven hospital cases linked to alfalfa sprouts

Updated 21 Jun 2018, 3:03pm

South Australians are being warned not to eat alfalfa sprouts produced by SA Sprouts after seven people were hospitalised with salmonella.

The company has been shut down and SA Health says people should throw out or return the product.

SA Health chief medical officer and chief public health officer Paddy Phillips said there had been 21 recent confirmed cases of the salmonella havana strain, including the seven hospital cases.

"We are advising anyone who has purchased the recalled SA Sprouts alfalfa sprouts products to return them to the place of purchase for a refund, or throw them away."



PHOTO: Alfalfa sprouts are commonly used in salads and sandwiches.

RELATED STORY: [SA bean sprouts given all clear after salmonella outbreak](#)

RELATED STORY: [Everything you need to know about food poisoning](#)

RELATED STORY: [Toddler hospitalised as SA bakery salmonella](#)

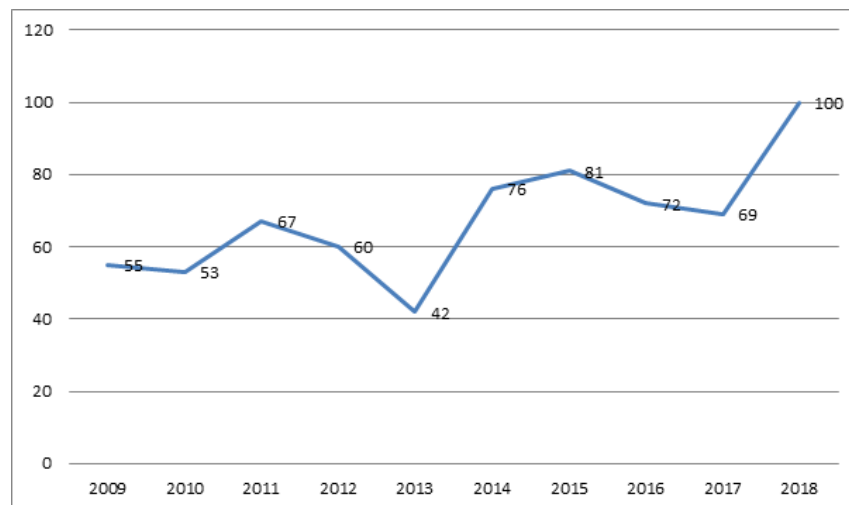
Sprout related recalls in Australia 2009-18

Product	Reason for recall	Company location (State)	Distribution	Year
Alfalfa	<i>Salmonella</i>	SA	SA	2018
Mung bean sprouts	Incorrect use by date	QLD	QLD	2016
Mung bean sprouts	<i>Salmonella</i>	NSW	NSW, QLD and VIC	2016
Mung bean sprouts	<i>Salmonella</i>	SA	VIC, SA and NT	2016
Sprouts (alfalfa and onion)	<i>E. coli</i>	NSW	NSW	2014
Organic mixed sprouts salad (broccoli, sunflower and radish)	<i>Salmonella</i>	NSW	NSW	2014
Mung bean sprouts	<i>E. coli</i>	VIC	VIC	2012
Various sprouts	<i>E. coli</i>	SA	SA	2011

Food recalls in Australia 2009-18

Number of recalls coordinated by FSANZ, by year and classification, between 1 January 2009 and 31 December 2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Undeclared allergen	17	13	24	17	16	27	39	33	34	46	266
Microbial contamination	28	14	13	25	12	26	13	20	8	20	179
Foreign matter	7	10	18	12	7	14	8	7	10	15	108
Biotoxin	1	2	4	1	2	3	15	6	4	2	40
Chemical/contaminant	1	10	5	1	0	1	0	1	1	2	22
Labelling	1	1	1	2	2	0	2	2	2	6	19
Other	0	3	2	2	3	5	4	3	10	8	40
Tampering	0	0	0	0	0	0	0	0	0	1	1
Total	55	53	67	60	42	76	81	72	69	100	675



27% of recalls due to microbial contamination

Foodborne disease surveillance in Australia: how do we know if there is a problem?

- OzFoodNet – national surveillance system for foodborne pathogens
- Dedicated epidemiologists monitor pathogen trends
- System for reporting and investigation of spikes in human disease or unusual trends
- Approximately 9 outbreaks attributed to sprouts since 2008

Case Study: *Salmonella* Saintpaul outbreak

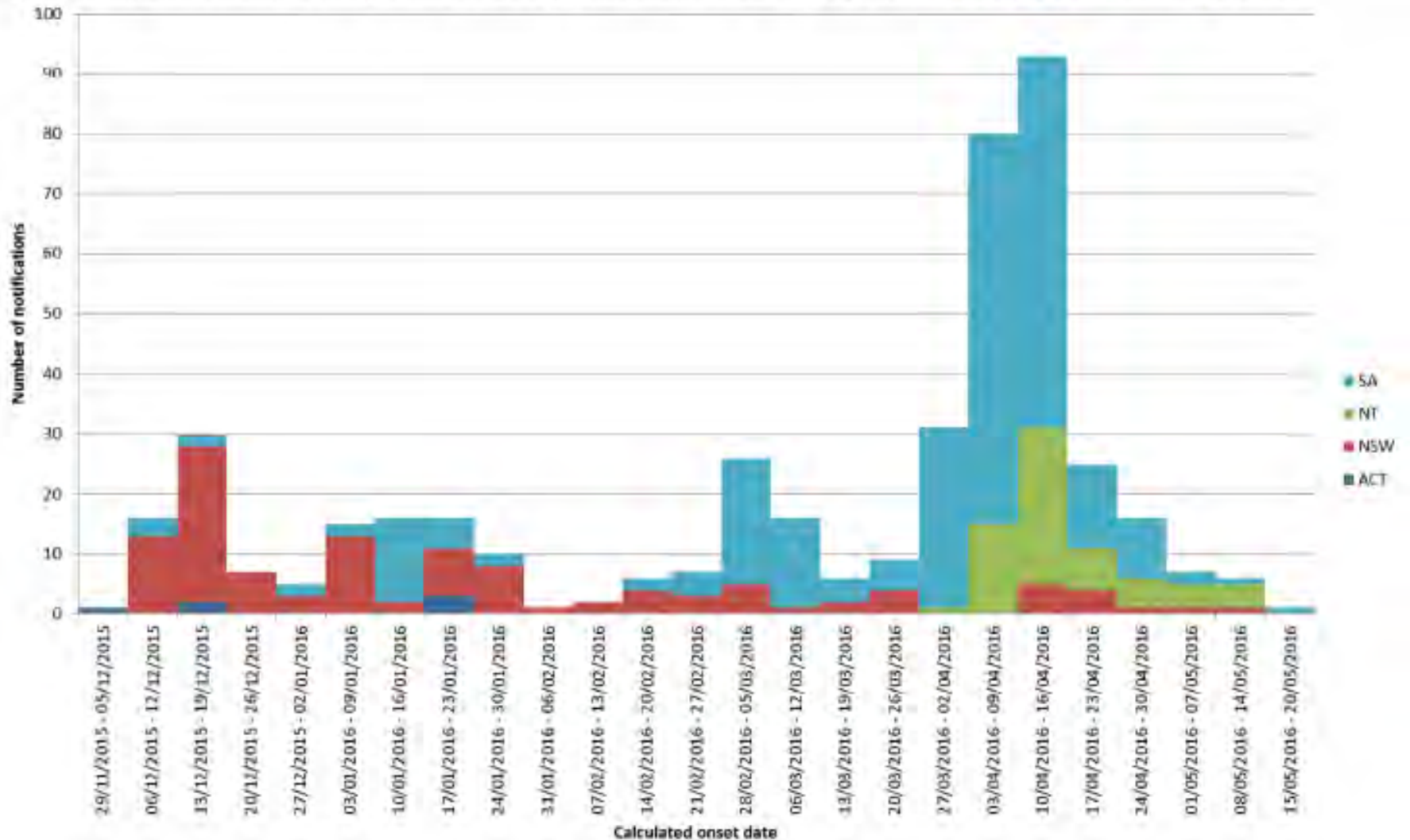
- Jan 2016 – increase in *S. Saintpaul* detected in NSW
- 62 cases detected 1 Dec 2015 – 12 Jan 2016
 - Expected background 2 cases per week
- Increase in cases in 2 other states
 - National outbreak investigation triggered

Salmonella Saintpaul outbreak: implication of mung bean sprouts

- Sprout consumption reported <20% NSW cases
 - Cases often have poor recollection of eating sprouts
- Surge of cases in South Australia, March 2016, led to mung bean sprouts identified as the source
- Consumer level recall
- Seed batch only sent to two sprout growers (NSW, SA)
 - Poor handling practices at grower facilities

Sprout related illness

Figure 2: *Salmonella* Saintpaul cases by jurisdiction of exposure, 1 Dec 2015 -27 May 2016.



What next?

- Review of the Food Standards Code
- Greater focus on high-risk horticulture in Australia (including sprouts)
- Jurisdictional food safety Ministers requested FSANZ to identify appropriate regulatory and non-regulatory interventions in this sector (June 2018)

Potential changes to sprout regulation in Australia

- Greater use of 'Code of Practice' to support outcome-based standards
 - E.g. content of Codex Annex for Sprout Production
 - Training material/documentation for workers and businesses
- FSANZ currently scoping options with regulators, industry workshops to be held

What does the future hold?

- New technology
- Majority of sprout growers in Australia still using large volumes of chlorine to sanitise seeds
- Commercialise new methodology to allow safer production and reduced risk



Questions?