

# **Perceptions of Seafood Safety**

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# General Food Safety Consumer Perspectives

- **Consumer perception affects how food products are positioned in the marketplace**
- **Activists play upon the ‘anti-technology’ and ‘anti-correction’ structural biases of the broadcast, print and electronic media to affect perception of aquatic food products**
- **Activists would be less successful if there was greater confidence in current food safety controls and regulatory system**

# Twisting Consumer Perception

- **Activists fix an idea in the mind of the consuming public that is difficult if not impossible to dislodge when facts are finally (if ever) presented.**

# Anti-Technology Structural Bias

**A political, anti-science or anti-technology perspective embedded in media.**

# Media misinformation is a driver for consumer perception about food safety

- **Intrinsic biases are exacerbated by how information is conveyed to consumers**
- **Activists of various stripes interlink websites and are able to dominate the stream of discussion on controversial issues to which consumers are exposed**
- **Companies and regulators are almost always reacting to an incident or controversy and are placed in a defensive position**

See: DeGregori, T.R. Maddening media misinformation on biotech and industrial agriculture. American Council on Science and Health. Aug 2007.

[www.acsh.org](http://www.acsh.org).

## **News 'shelf life' affects perception of food safety**

- **News has a short shelf-life - less than two days for most stories.  
[Consider for a moment, how quickly the headlines change on news shows or on internet news sites]**
- **Consumers have a short attention span for the news**
- **Winslow Smith effect**

# Media bias affects consumer perception of food safety

- **The ‘anti-correction’ structural bias**
  - **op-ed policies of most major newspapers do not allow one opinion piece directly to contradict a previous one**
  - **True even if the contradictory opinion is new and independently presented from a credible source. (DeGregori, 2007a)**
  - **‘soft’ versus ‘hard’ news vs ‘opinion pieces’**

# Anti-Correction Structural Bias

- **Factual errors if admitted and corrected**
  - **Are by a small disclaimer buried within the interfolds of the paper on some later date**
  - **Provide no meaningful connection with earlier story**
  - **Less prevalent in broadcast than print media**
  - **Rare on internet**



# Word choice controls the debate

- The language and definitions of activists become widely adopted, sometimes over a very short period of time
- Convenient short-hand to represent a wide ranging complex issue
- Clever, catchy new words such as 'frankenfoods' and 'pharming' are potent and highly charged terms that cause a visceral reaction among 'enlightened' consumers

# Chemical - 1973

1. Of or having to do with chemistry; in chemistry:  
*Example: A chemical formula. Chemical research has made possible many new products.*
2. Made by or used in chemistry: *Example: Chemical apparatus for the laboratory is often made of special glass.*
3. Working, operated, or done by using chemicals:  
*Example: A chemical fire extinguisher. Exhausted gases in a chemical rocket have a high molecular weight.*

*Implication of 1970's definition: Chemicals are useful*

# Chemical - 2007

1. A substance produced by or used in a chemical process.
2. Chemical slang. Narcotic or mind-altering drugs or substances.
3. Of, used in, produced by, or concerned with chemistry or chemicals: *a chemical formula; chemical agents.*

***Implication of new definition:*** Chemicals are 'there' (ambivalence) but often dangerous ('bad drugs' without reference to 'good drugs', weapons (chemical agents))

# Food additive -1973

**Any substance, natural or synthetic, that is added to food to preserve, enrich or color it: Example: *Benzoic acid and sodium benzoate [are] chemicals used as food additives***

***Implication of 1970's definition: Additives serve a useful purpose***

# Food additive - 2007

1. A substance added directly to food during processing, as for preservation, coloring, or stabilization
2. Something that becomes part of a food or affects it as a result of packaging or processing, as debris or irradiation

***Implication of 1970's definition: Unnatural, man made, potentially dangerous (irradiation) or unwholesome (debris)***

# Sustainable - 1973

1. To keep up, keep going, maintain, prolong.  
*Example: Hope sustains him in his misery.*
2. To supply as with food or provisions; to sustain a family. *Example: She eats barely enough to sustain life*
3. to hold up, support

*Implication of 1970's definition: Sustainable applies broadly to the human condition, agriculture production not mentioned*

# Sustainable - 2007

1. (agriculture): Any of a number of environmentally *friendly* farming methods that preserve an ecological balance by avoiding depletion of natural resources
2. A method of agriculture that attempts to ensure the profitability of farms while preserving the environment

***Implication of new definition: Narrowed definition. Organic, green. Other production methods are 'bad'***

# Today's Random Medical News

from the New England Journal of  
 Basic-Inducing  
 Cockchuck



CAN CAUSE



IN



Photo by the author Tom Brainerd, www.brainerd.com



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# How does this affect seafood safety?

- **The high level of scientific illiteracy among the general public plagues us in the food safety arena.**
- **Food is required to be safe, but it is impossible to produce food with zero risk.**
- **Consumers are willing to accept less risk in the food supply (e.g. ConAgra potpie recall)**

# How does this affect seafood safety?

- **Trying to clearly and convincingly argue that an assuming some risk with food is appropriate is a difficult position to take with a reporter.**
- **Particularly for individuals in the agriculture community or whose work is to support agribusiness.**
- **These individuals appear to be biased regardless of how credible and competent they may be.**

# How does this affect seafood safety?

- **Misinformation on scientific issues is often presented in feature articles or components within lifestyle sections and not as ‘hard news’**
- **Editors and publishers justify their decisions not to publish retractions, factual corrections, or a requisite balancing opinion since ‘food’ stories are not ‘hard news’**

# How does this affect seafood safety?

- **Stories put the focus on issues that pose little food safety risk but take disproportionate quality control or regulatory resources to address (mercury, chloramphenicol, allergens)**
- **Dilutes the efforts of public health agencies from real issues with seafood safety and quality: pathogen contamination, filth, decomposition, and misbranding (species substitution), misbranding generally**

# Current Import Alerts Unapproved Drugs

- Shrimp China Malachite Green
- Tilapia China Malachite Green
- Shrimp Malaysia Chloramphenicol
- Shrimp Mexico Gentian Violet
- Eel Taiwan Malachite Green
- Clarias Thailand Ciprofloxacin
- Shrimp Venezuela Chloramphenicol
- Basa Vietnam Cipro/enro floxacin
- Pangasius Vietnam Enrofloxacin
- Shrimp Vietnam Chloramphenicol
- Aquaculture, generally – formaldehyde use

# Recent Seafood Recalls

- Smoked salmon – *Listeria*
- Sardine – *Clostridium botulinum* (risk)
- Trout – undeclared sulfites
- Seafood dip – *Listeria*
- Smoked salmon - *Listeria*
- Smoked mackerel – *Listeria*
- Fish balls- undeclared egg white
- Frozen trout nuggets, patties – unlabeled whey protein
- Raw oysters – *Vibrio*
- Shark cartilage – *Salmonella*
- Canned marinated herring – *Clostridium botulinum* (risk)
- Tuna steaks – histamine
- Cooked lobster meat – *Listeria*

# Newly Proposed Food Safety Programs

- **Efficient targeted, science based regulation and enforcement**
- **Motive is to increase safety and consumer confidence in globalized food supply**
- **More resources for food safety functions including public/private partnerships**
- **Greater self policing and incentives for this**
- **Flexibility to address increasingly complex and diverse product mix and distribution chain**



# **‘Four Pillars’ Program**

- **Mandatory foreign supplier quality assurance program**
- **Voluntary qualified importer food safety program**
- **Building foreign government capabilities**
- **Building FDA capacity**

# Foreign Supplier Quality Assurance Program

- **GAqPs**
- **GMPs**
- **HACCP**
- **SSOP**
- **GLPs**
- **Employee training**
- **Compliant records (21 CFR Part 1)**
- **Vendor management program**
- **Improved coordination with CBP and ID higher risk food or producers**

# Voluntary Qualified Food Safety Program

- Limited FDA oversight
- Review and approve applications for qualified exporters
- Reduced clearance times
- MOUs with foreign governments

# Building Foreign Food Safety Capabilities

- **Developing countries – laboratory and infrastructure, policies, professional training**
- **One size does not fit all**
- **Sharing of surveillance information, methods and data**
- **Transparent regulatory requirements**

# Rebuild FDA

- Increase funding and personnel
- Increase efficiency of import processes
- New methods and validated protocols
- Develop rapid methods (1 hr or less)

# Summary

- **Improving perception of seafood safety will require concerted effort of all involved**
- **Must be as pro-active to prevent and to reduce real food safety risk**
- **Market food safety features**



*I am required by law to tell you that everything you  
ordered today may be harmful to your health.*

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