

Food Safety Requeriments and Consumer's Perception: are we on the right direction?

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Global Food Safety Concerns





2011 Estimates of Foodborne Illness in the United States



Foodborne diseases

Each year 1 in 6 Americans
(48 million people) gets sick

128,000 are hospitalized

3,000 die



2011 Estimates of Foodborne Illness in the United States

Main findings of the study

Foodborne diseases are an important public health burden in the United States



Among the 31 known foodborne pathogens:

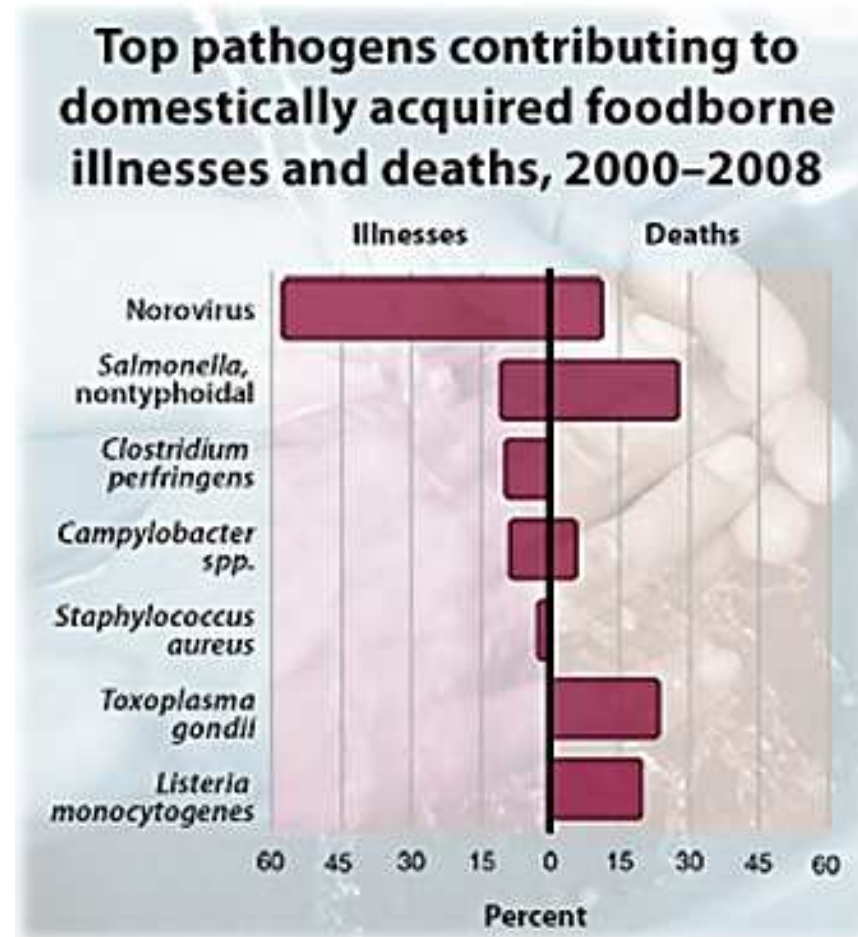
- Nontyphoidal *Salmonella*, *Toxoplasma*, *Listeria*, norovirus caused the most **deaths**;
- Nontyphoidal *Salmonella*, norovirus, *Campylobacter*, and *Toxoplasma* caused the most **hospitalizations**; and
- **Norovirus** caused the most **illnesses**, because it affects so many people.





2011 Estimates of Foodborne Illness in the United States

Main findings of the study





CDC Advice to Consumers

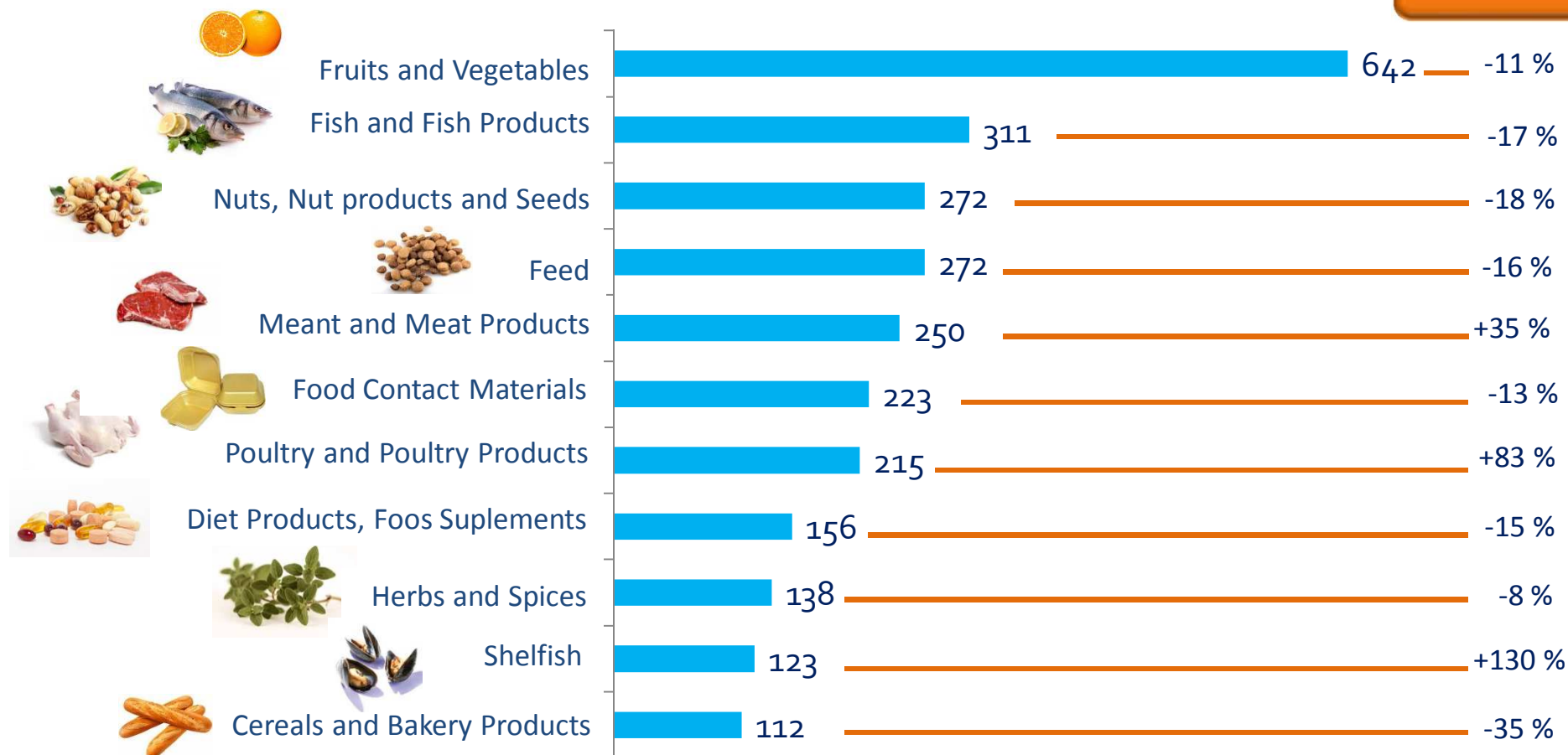
What can consumers must do to protect themselves from foodborne illness?





The Rapid Alert System for Food and Feed, 2013 Notifications by product category

Compared
to 2012

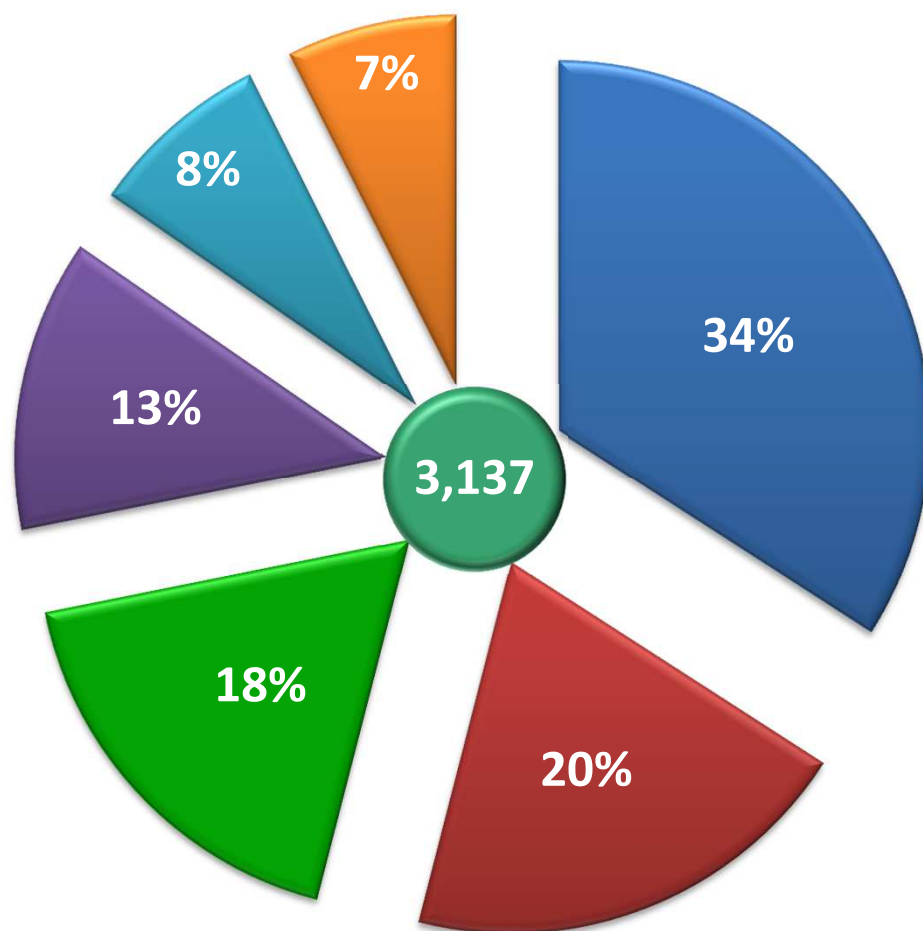


Number of notifications transmitted through the RASFF
3,137



The Rapid Alert System for Food and Feed, 2013

Notifications by Hazard



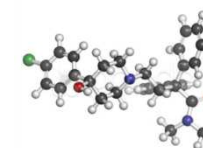
■ Pathogenic microorganisms



■ Pesticide residues



■ Mycotoxins



■ Heavy metals



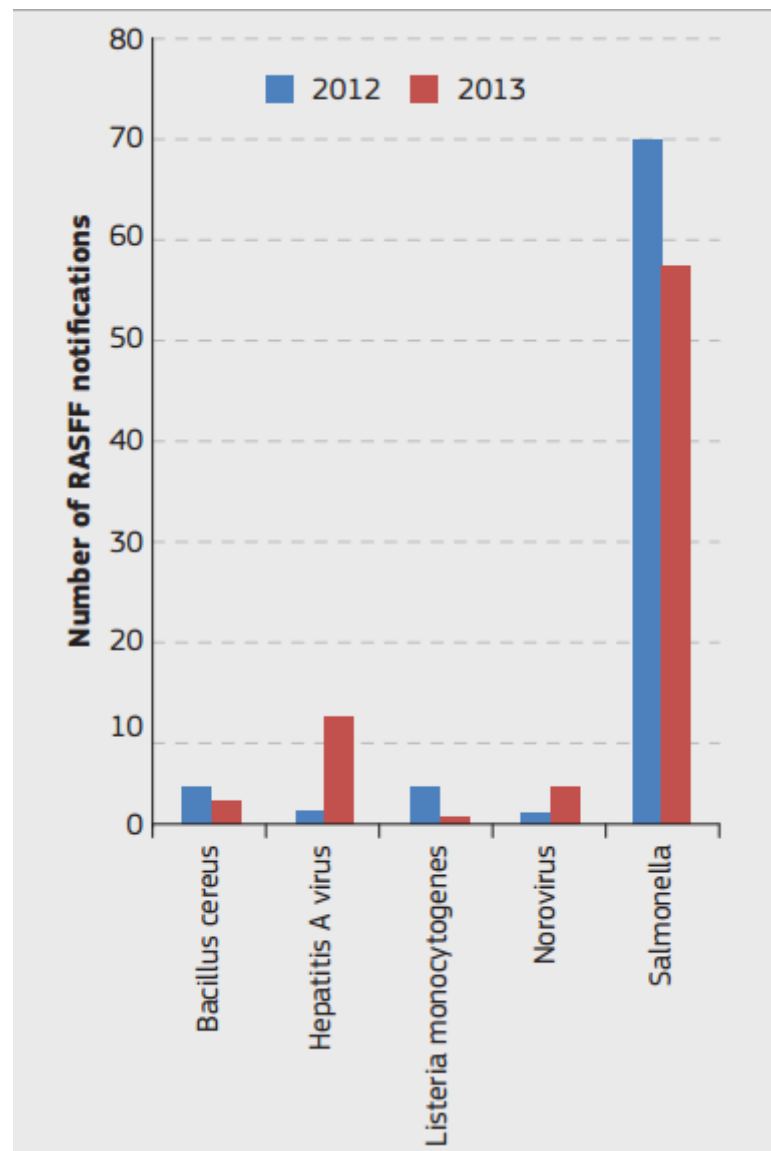
■ Composition



■ Adulteration/fraud



The Rapid Alert System for Food and Feed, 2013 Pathogens in fruits and vegetables





Food Safety Commitments



Food Safety Crisis



China crisis, melamine contamination, 2008



Outbreak of Listeriosis linked to whole cantaloupes, Colorado, 2011



Outbreak of Shiga Toxin-producing *Escherichia coli* O157:H7 Infections Linked to Organic Spinach, Massachusetts, 2012

The case of dioxin in Irish pork and beef 2008



Sausages Recalled in Canada for Possible Salmonella Contamination, 2014

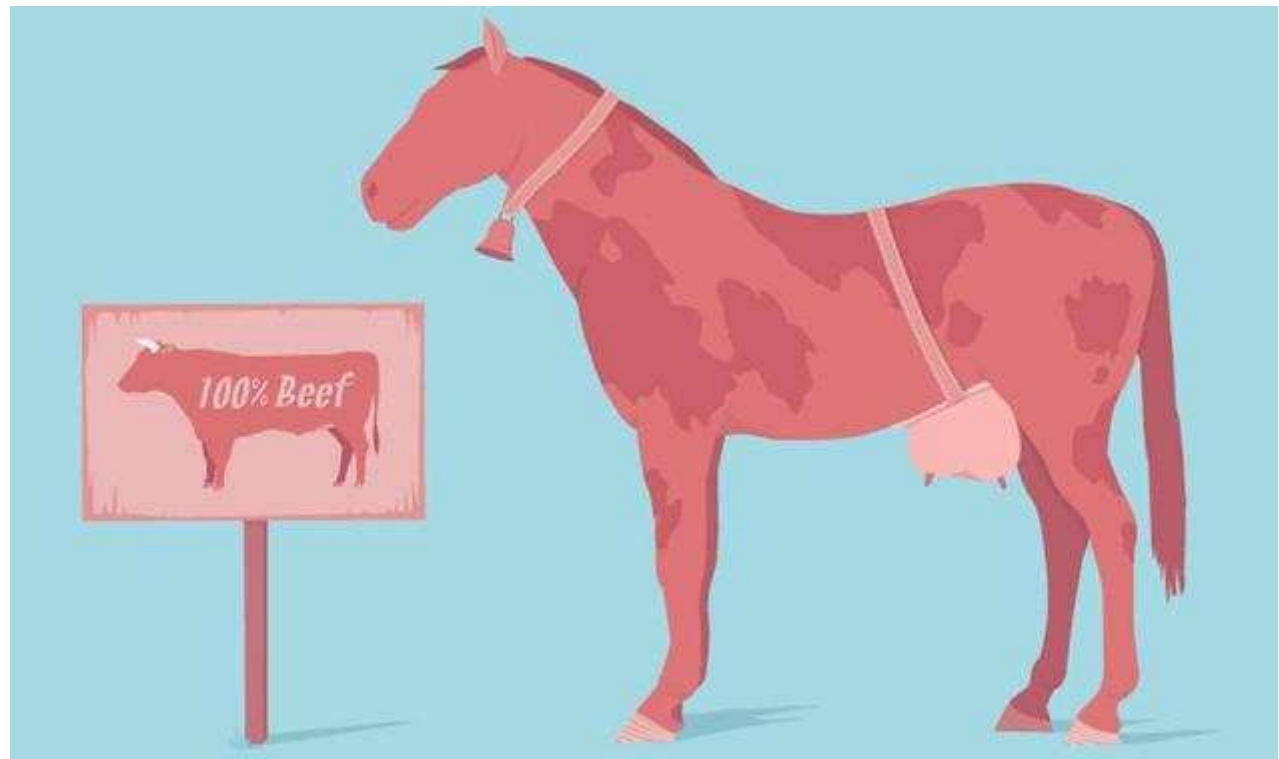


Food Authenticity



**FOOD
FRAUD**

Horse meat scandal in the EU, 2013



Food Safety News

Breaking news for everyone's consumption

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Report: Chicken on Menu at 2014 Food Safety Summit was Contaminated

BY DAN FLYNN | SEPTEMBER 25, 2014

The pan-seared breast of Chicken Marsala served by the Baltimore Convention Center's exclusive caterer was the food item most commonly consumed by the 216 attendees sickened by the lunch served last April 9 at the Food Safety Summit's annual conference. It was likely contaminated with *Clostridium perfringens* (*C. perfringens*), a spore-forming gram-positive bacterium commonly found on raw meat and poultry.

Attendees at the popular conference were from 42 states, Canada, Mauritius and Costa Rica. The local health department learned of the illnesses not from the organizers of the event, the convention center, or the caterer, but from calls by attendees to the city's 311 service.

According to the report being released today by the Maryland Department of Health and Mental Hygiene, the illnesses experienced at the 2014 Food Safety Summit in Baltimore were attributed to *C. perfringens*. Those sickened experienced symptoms of diarrhea, stomach cramps, nausea, headaches, chills, vomiting and fever between April 8-12, 2014.

About two-thirds of those sickened experienced the symptoms after eating the chicken lunch that was served by the Baltimore Convention Center's catering company, called Centplate, according to the final report of the

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Meat
Produce
Brewery

MOST READ ON
FOOD SAFETY NEWS

- Study: Hand Sanitizers, French



<http://www.foodsafetynews.com/2014/09/c-perfringens-in-c/#.VEvn9PmUeAU>

“...not all companies make the commitment that is needed to meet public expectations for food safety, and when one company fails, many companies can be affected by market disruptions and loss of sales.”

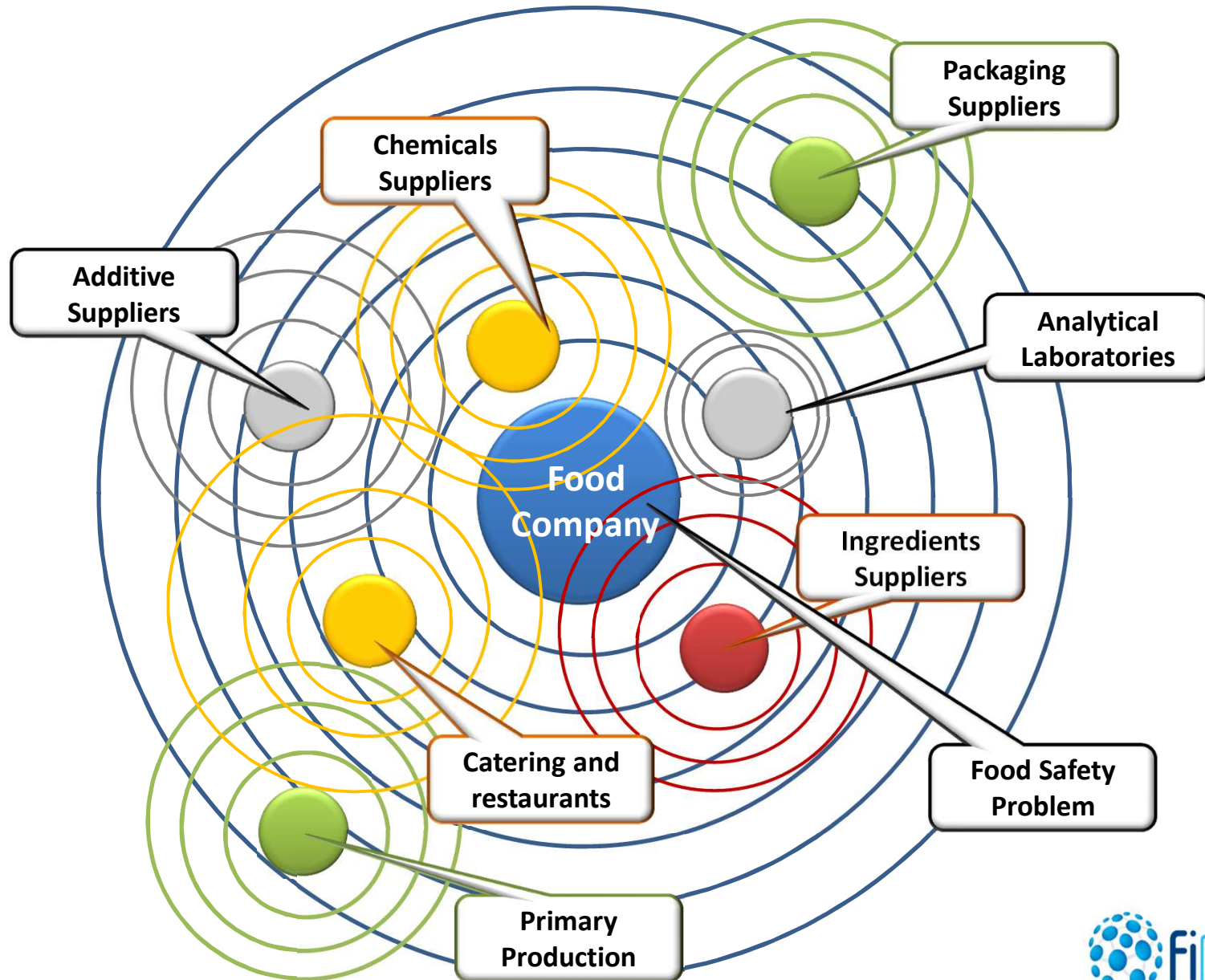
Michael Taylor

China International Food Safety and Quality Conference and Expo, 2012



Consumer confidence critical in food safety battle, says FDA representative, 2012
Breaking News on Food Safety & Quality ControlFoodQuality news.com

One small change can have an enormous impact; The Ripple effect



Communication Through



Affect the consumer trust in regulators and
actors in the food chain

But, is it..

Consequences in Consumer Perception

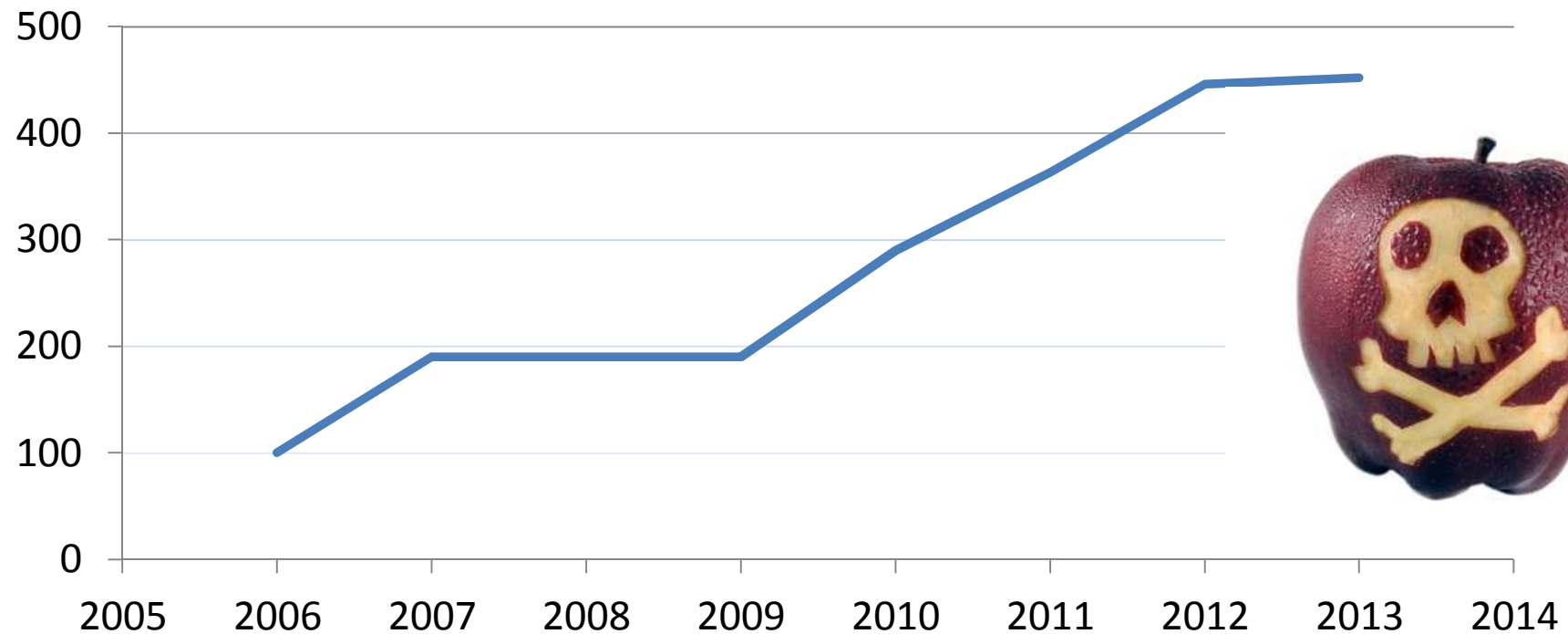
Expectations can often exceed reality

Consumers are becoming disconnected from food production and processing

Not knowledgeable of inherent risks associated with foods



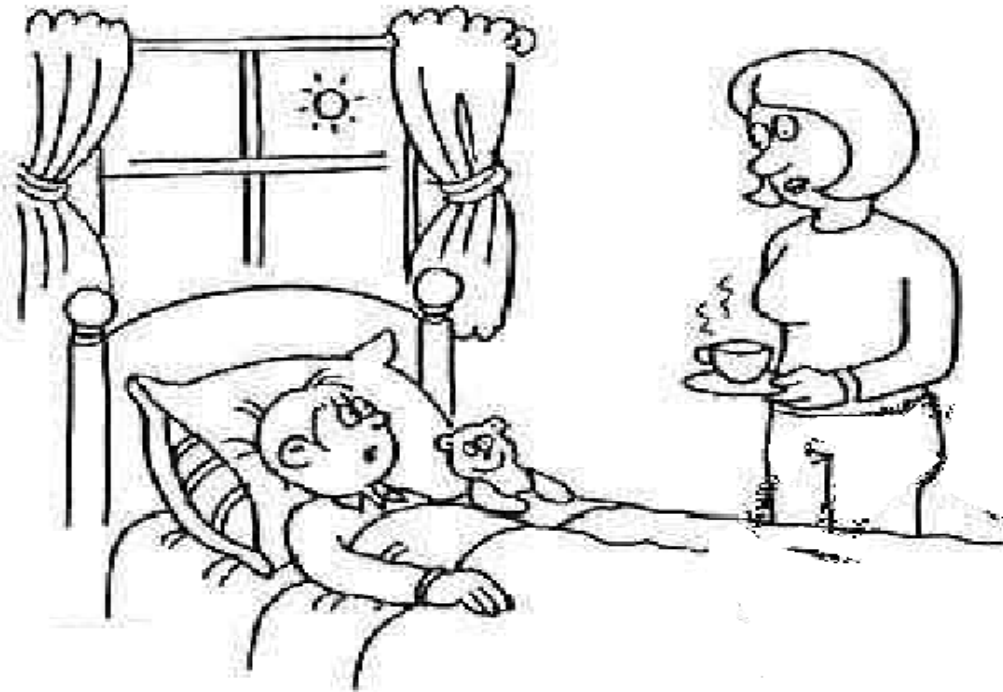
Access to Official Information



The Rapid Alert System for Food and Feed, 2013 Notifications for Pesticide Residues

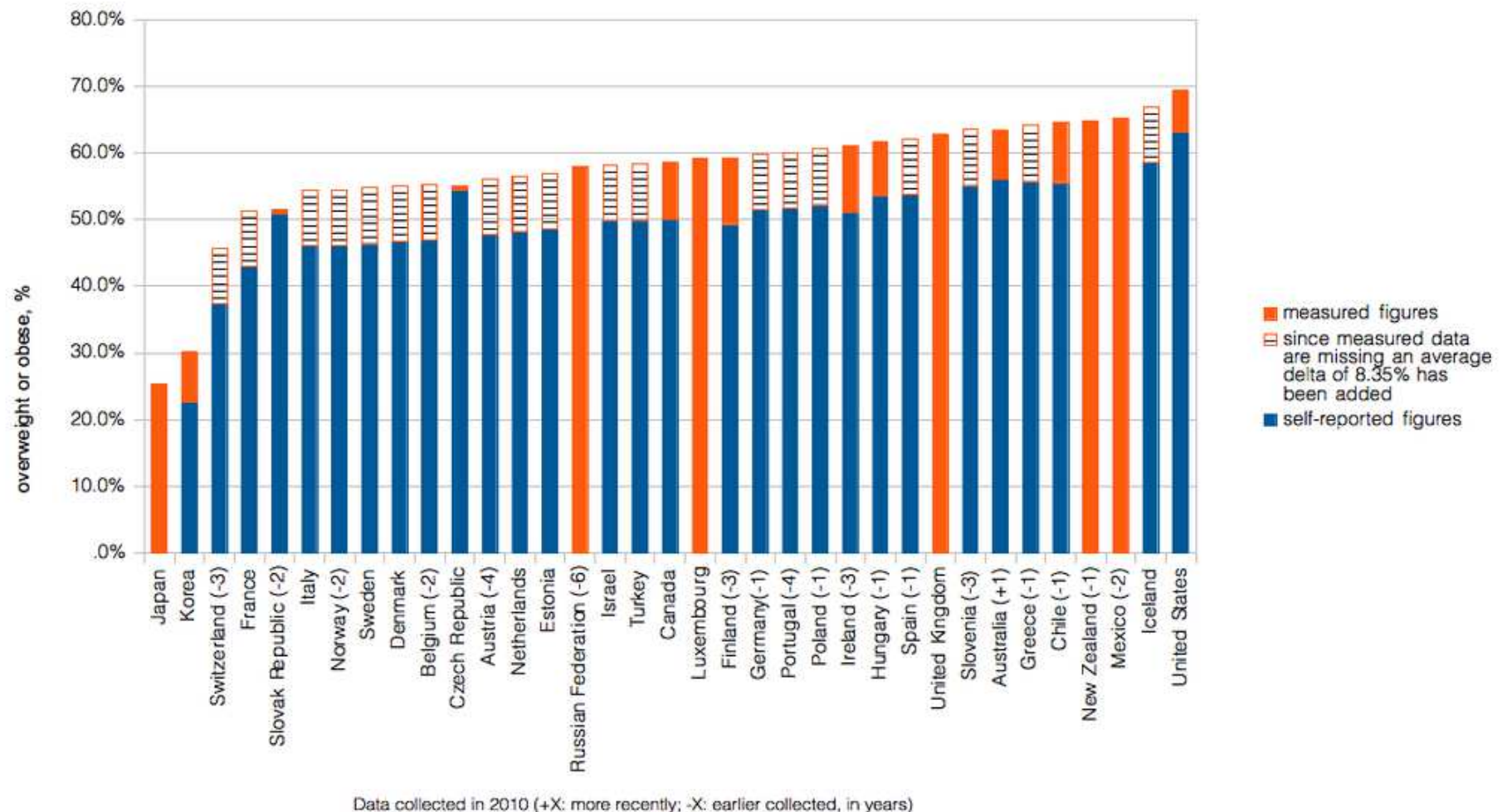
Eurobarometer 2010: pesticides first priority !!

Impact of Consumer Risk Perceptions



"I feel ill Mum. I think it's the pesticides in the veges.
From now on I'm going to have to eat chips, burgers
and pizzas."

But on the other hand...



Percentage of overweight or obese population, OECD Statistics, 2013



“Understanding consumers’ perception of risk is critical to providing timely, clear and effective communications regarding food safety...”

No!! We need a balance between perceptions and science-based risks



Which way
to go?



Customer demands and preferences constantly changing....

Consumers are better educated about food & food related issues.

Complexity of agri-food supply chain

Gaps in product safety implementation

Food trade globally

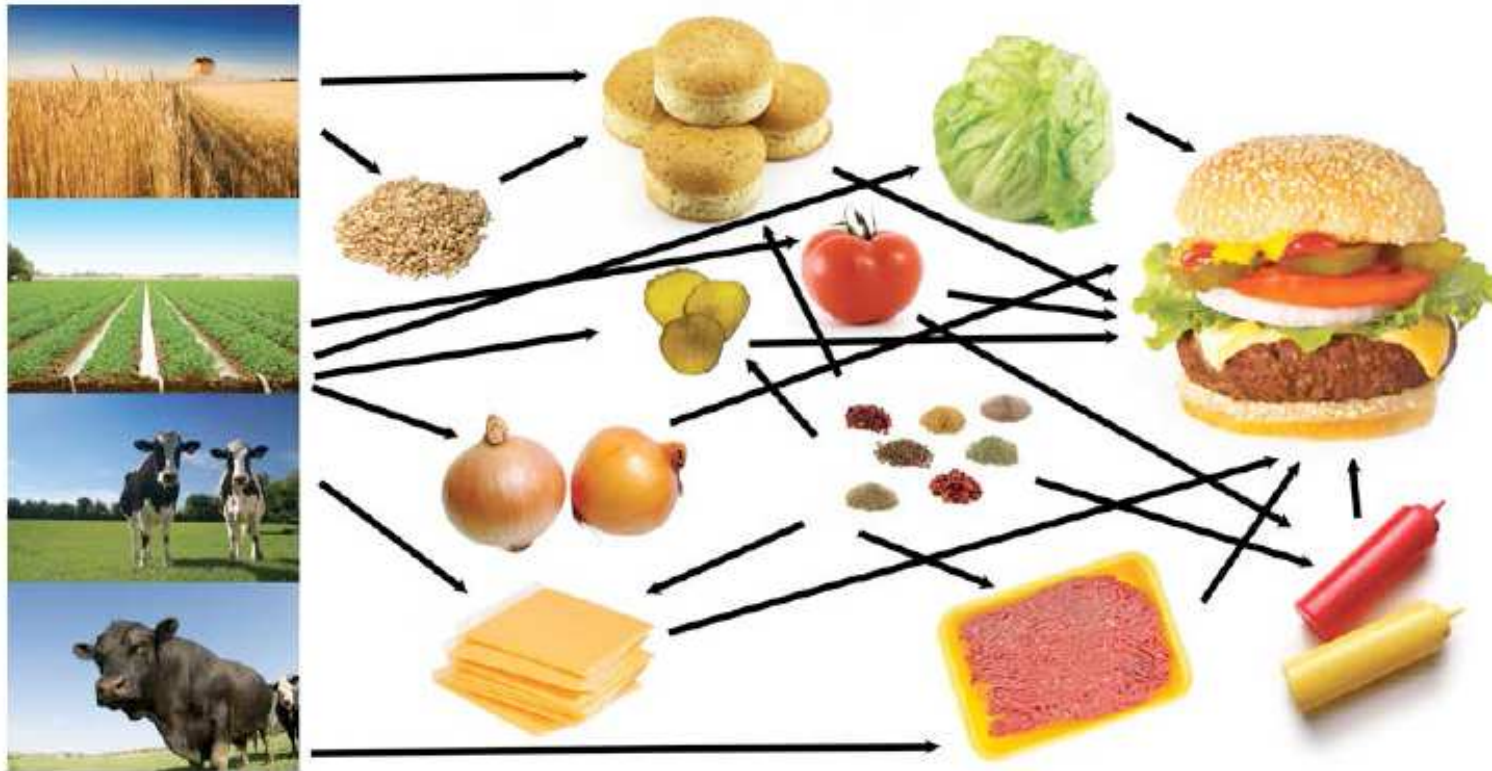
Additional and more specific laws and regulations

Product liability – Brand Protection.....



Rapid globalization of food production increased potential likelihood of food contamination

Global Supply Chain Complexity



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Global Supply Chain Complexity



bleached wheat flour
malted barley flour
thiamine
riboflavin
Niacin
folic acid
reduced iron
Water
corn syrup
sesame seeds
soybean oil
Yeast
Salt
calcium sulfate
calcium carbonate
calcium silicate

soy flour
baking soda
wheat gluten
calcium propionate
enzyme
mono- and diglycerides
diacetyl
tartaric acid
esters
ethanol
sorbitol
polysorbate 20
potassium propionate
sodium stearoyl lactylate
corn starch
ammonium chloride
ammonium sulfate
calcium peroxide
ascorbic acid
azodicarbonamide

Milk
milkfat
Water
cream
sodium citrate
salt
sodium phosphate
sorbic acid
artificial color



cheese culture
acetic acid
soy lecithin
Enzymes
starch



Cucumbers
water
Vinegar
Salt
calcium chloride
Alum
natural flavorings
polysorbate 80
turmeric



USDA inspected beef

Soybean oil
pickles
distilled vinegar
water
egg yolks
HF corn syrup
sugar

onion powder
corn syrup
spice
spice extractives
salt
xanthan gum

mustard flour
prop. glycol
alginate
sodium benzoate
potassium sorbate

mustard bran
garlic powder
hydrolyzed proteins
caramel color
paprika

Turmeric
calcium disodium EDTA



lettuce



dehydrated onions

Grill Seasoning
Salt
Pepper

cottonseed oil
soybean oil



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Globalizing the Cheeseburger

Vinegar

Argentina
Australia
Austria
Belgium
Brazil
Canada
China
Chile
Colombia
Denmark
Dom. Rep
France
Germany
Greece
Hong Kong
Israel
Italy



Japan
S. Korea
Lebanon
Peru
Poland
Portugal
Serbia
Philippines
Russia
S. Africa
Singapore
Spain
Sweden
Turkey
Taiwan
U.K.

Garlic Powder

Brazil
Canada
China
Germany
India
Israel
Japan
S. Korea
Mexico

slide3.tiff



Tomatoes

Belgium
Canada
Colombia
Costa Rica
Dom. Rep.
Guatemala
Israel
Morocco
Mexico
Netherlands
New Zealand
Poland
Spain

Beef

Australia
Canada
Chile
Costa Rica
Honduras
Japan
Mexico
Nicaragua
New Zealand
Uruguay



Wheat Gluten

Australia
Belgium
Canada
China
Czech Rep.
France
Germany
Kazakhstan
Lithuania
Netherlands
Poland
Russia
Switzerland
Thailand
U.K.

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PRIMARY PRODUCTION > HARVEST > TRANSPORTATION > STORAGE > PROCESSING > DISTRIBUTION > RETAIL/FOOD SERVICE > CONSUMER

Challenges Bring Opportunity

Doing more of the same old thing usually doesn't lead to major improvements...

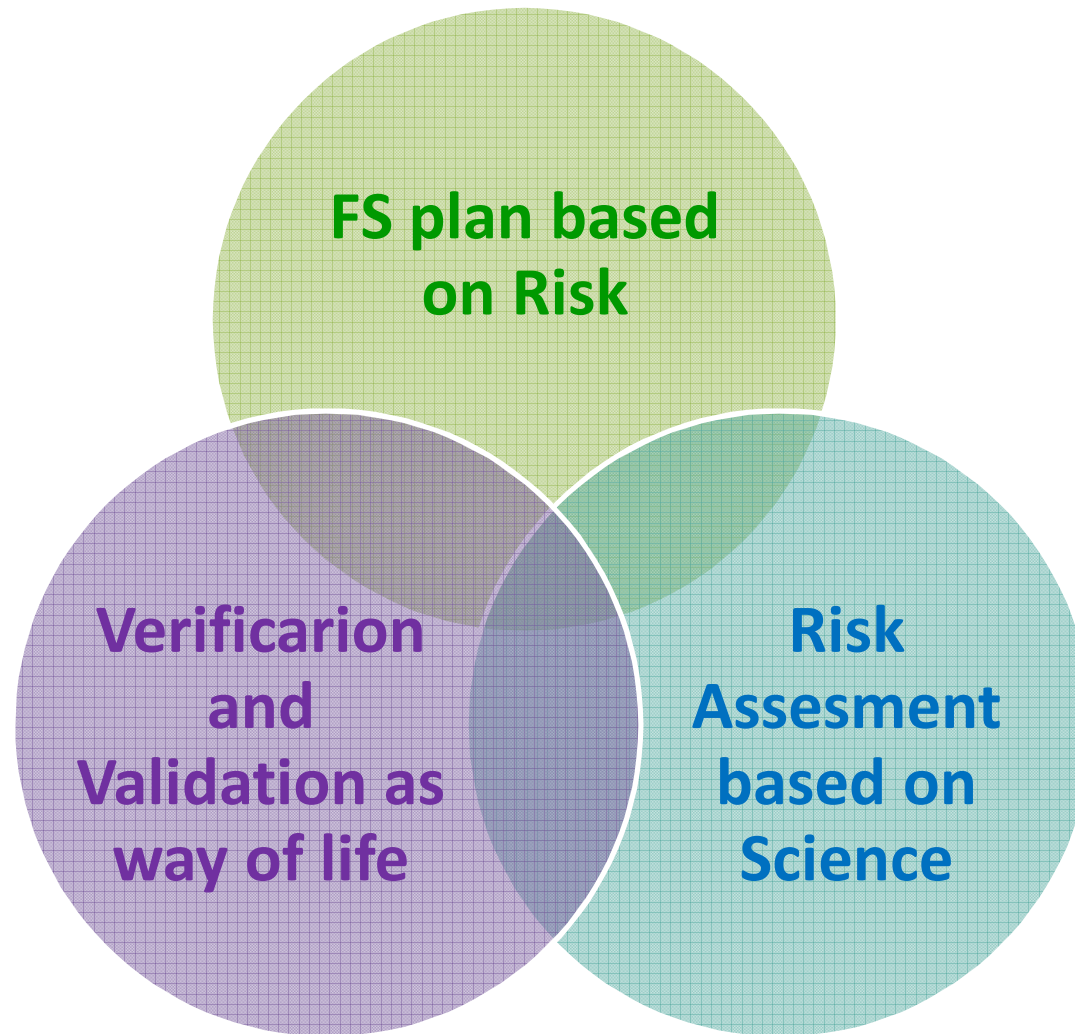


Innovation is the key

The use of existing technologies and the development of new tools is essential to ensure Food Safety

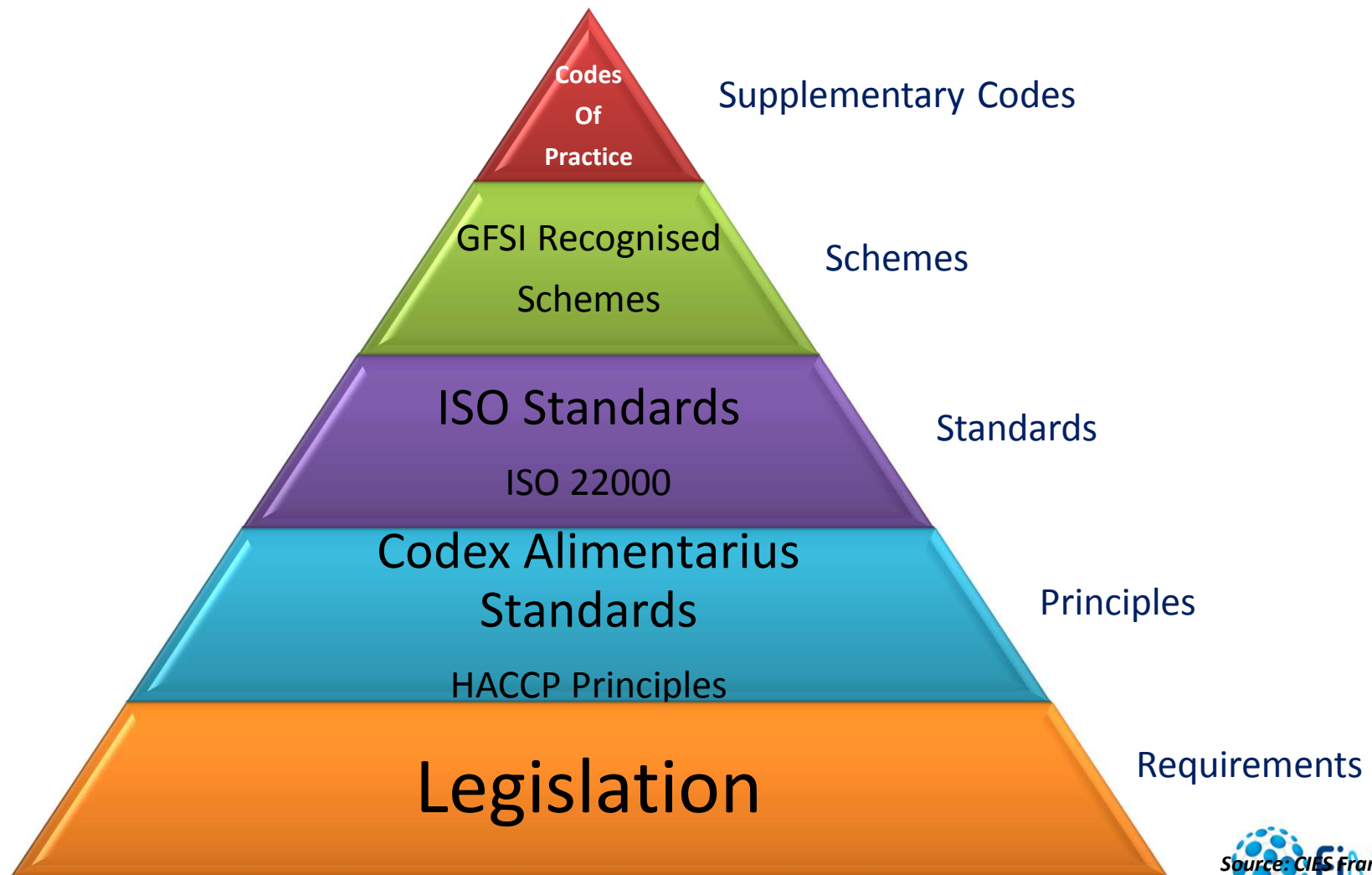


Ensuring Food Safety



With Foundation in Science

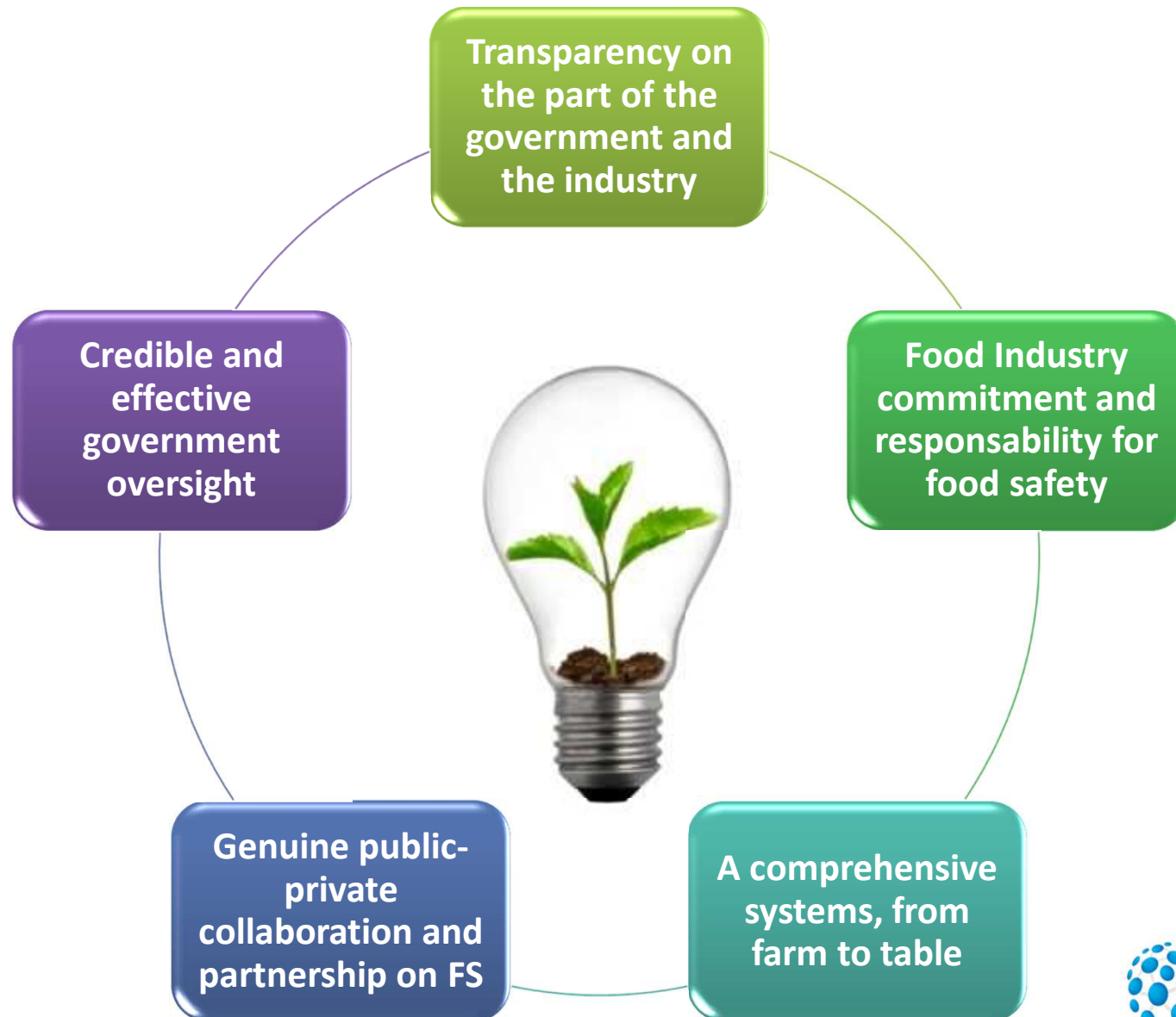
Food law needs to catch up with the science and scientists need to understand the law



To Increase the Trust in Food and Feed



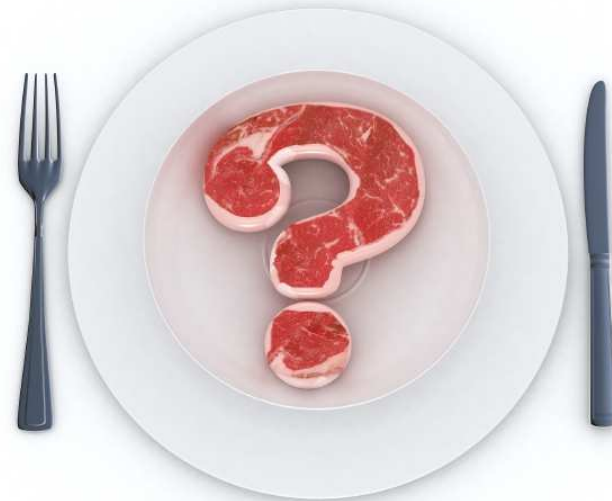
Food Safety and consumer confidence are the product of common effort that includes five key themes:



Michael Taylor,
China International Food Safety and Quality Conference and Expo, Changhai, China, 2012

1. Food Industry commitment and responsibility for food safety

- Regulation must never be seen as a substitute for industry responsibility and commitment
- Innovation in preventive control and verification systems (GFSI)
- Early problem detection:
 - Minimize its scope
 - Protects consumers
 - Increase consumer confidence



GFSI Vision: Safe Food for Consumers Everywhere

Mission: Driving continuous improvement in food safety to strengthen consumer confidence worldwide

GFSI

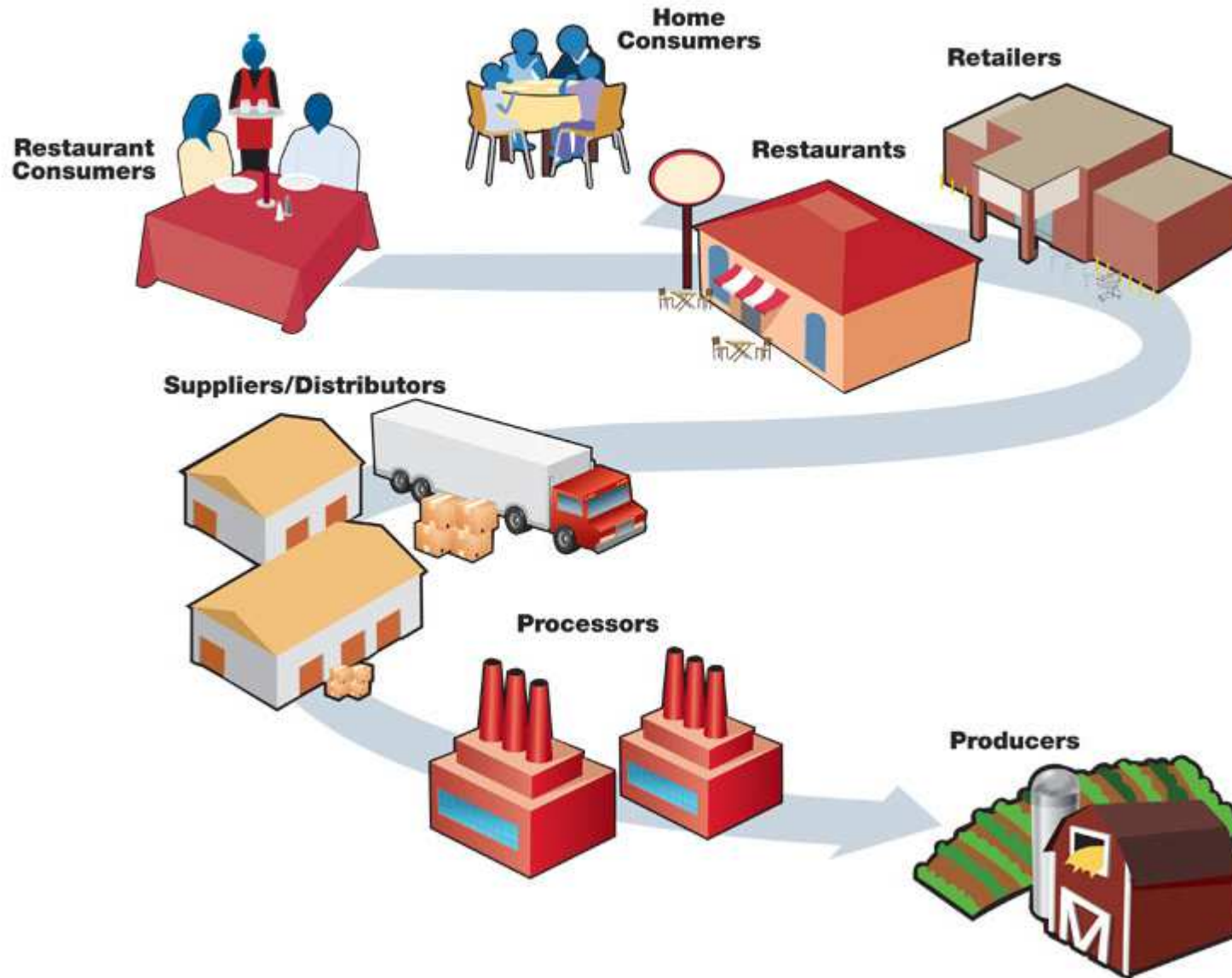
2. A comprehensive systems approach, from farm to table

- Maintaining consumer confidence requires doing what's reasonably possible at each step along the food chain to prevent or minimize hazard



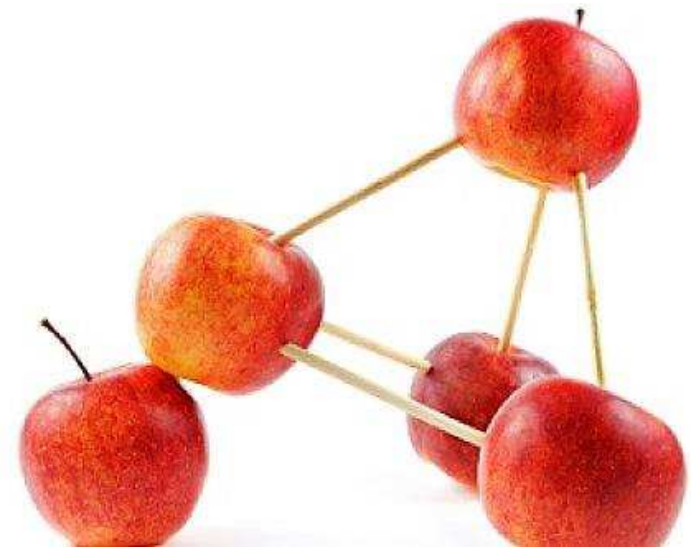
Food Chain Traceability

Tracing the food back to the source



3. Credible and effective government oversight

- Provision of guidance and technical assistance to industry, especially small and medium size firms
- Setting the standards, conducting inspections, building the international partnerships
- Building the scientific foundations
- Consumers expect government to play an active role on food safety



4. Genuine public-private collaboration and partnership on Food Safety

- Government sets the standards, but it cannot get the standards right without input from industry, academy and other private sectors experts
- Consumer Confidence is strengthened when...
- government-industry and other private stakeholders are seen working in active partnership toward a common goal.



5. Transparency on the part of the government and the industry

- Some countries have been recognized that it is needed to modernize the FS System.
- Transparency is essential to the credibility and effectiveness of governments
- Clear Information about the company's own food safety commitments and practices, and responding swiftly and openly during recalls
- Information about safe food handling practices for consumers



Communication is vital for consumer's confidence

**Don't let the media
become the crisis**





But...What can I eat?

What We Need?



**Nutritious
Food**



Safety Food



Healthy Food



**Sustainable
Food**



**Food Security/
Sustaining Food Chain**

And...



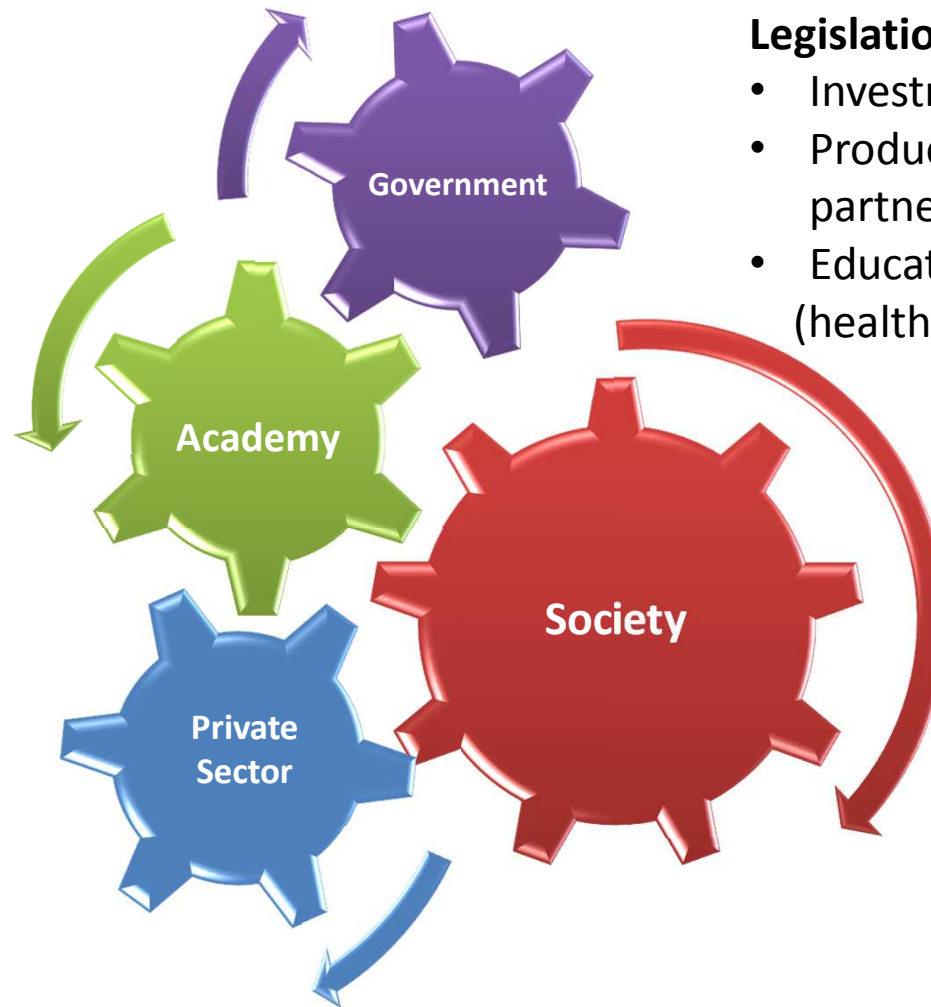
Solution: communication and coordination

Research

- Food products development
- New ingredients
- Improve performance.
- Shelf life studies

Investments

- Innovation and technology
- Preventive actions
- Self-control programmes
- Timely information (automation, IT).



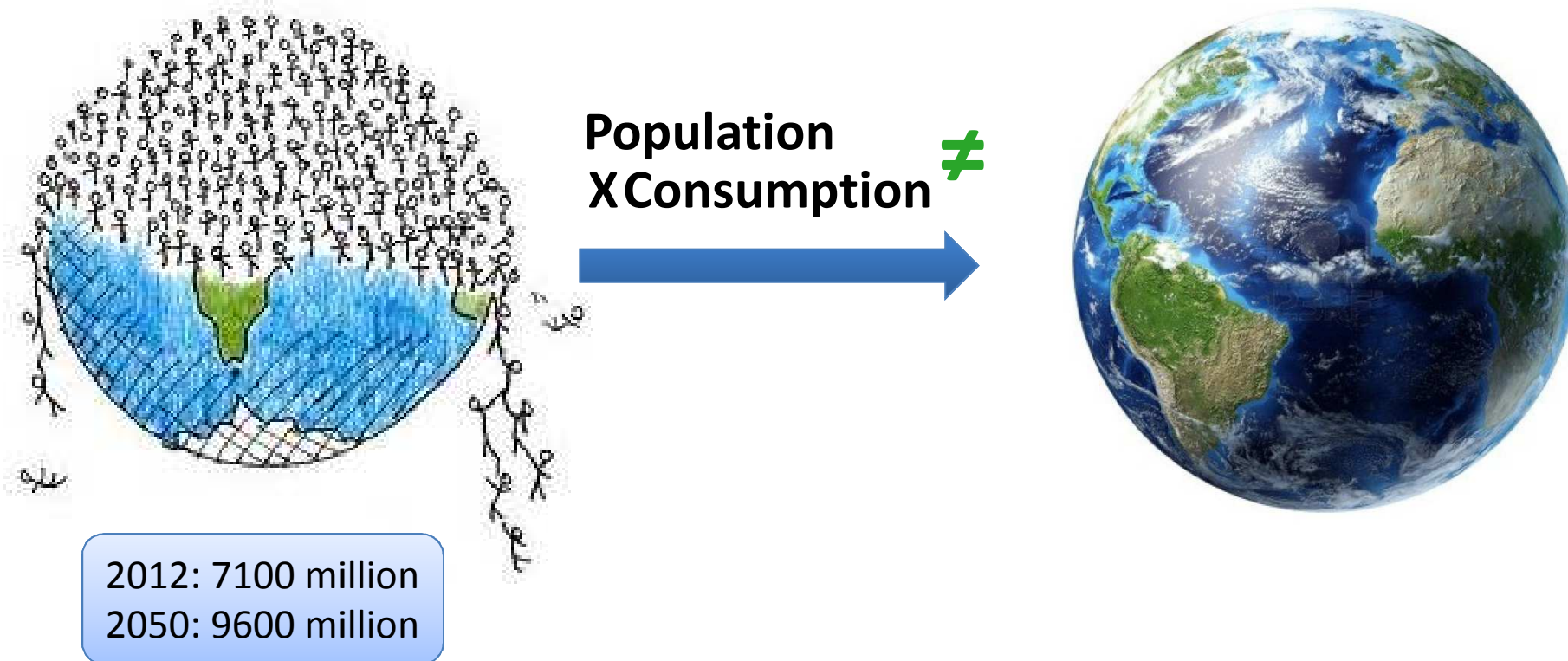
Legislation that encourages:

- Investment in R+D+i.
- Productive development partnerships
- Education (healthy and safe food).

Responsible food consumption:

- Healthy eating.
- Safe food handling
- Food losses/waste

Universal challenge to feed the world in 2050



Working Together...





Thanks!