Lessons learnt from chemical contamination of food to improve food safety

Nick Tomlinson
Food Standards Agency
United Kingdom

Previous problems
Food Fraud
Food adulteration
Counterfeit products

…and solutions
Analyse products
Publish results
….and brand names

Advice gets overlooked
“If you please, Sir, Mother says, will you let her have a quarter of a pound of your best tea to kill the rats with, and a ounce of chocolate as would get rid of the black beetles?” (Punch, 14 August 1855)

21st Century - What has changed?
What EU food law requires

Food shall not be placed on the market if it is unsafe (injurious to health or unfit)

Food businesses responsible for ensuring compliance with food law

EU-wide limits

- **Aflatoxins**
  - cereals
  - nuts & dried fruit
  - baby foods
  - milk (M1)
  - spices
- **Lead**
  - milk, formula
  - meat, offal
  - cereals, fruit, veg.
  - fats, oils, wine
  - fish, seafood
- **Cadmium**
  - meat, offal
  - cereals, fruit, veg.
  - fish, seafood
- **Ochratoxin A**
  - coffee, wine
  - dried fruit, grape juice
  - baby foods
  - cereals
- **Dioxins + PCBs**
  - meat, offal
  - fish, milk, eggs
  - oils and fats
  - milk, formula
  - cereals
- **Nitrate**
  - fresh lettuce
  - baby foods
  - spinach
- **Fumonisins**
  - cereals
- **Trichothecenes**
  - cereals
- **Zearelenone**
  - maize, wheat
- **BaP**
  - oils, fats, fish, shellfish, meat, babyfood
- **Fumonisins**
  - cereals
- **Trichothecenes**
  - cereals
- **Zearalenone**
  - maize, wheat
- **BaP**
  - oils, fats, fish, shellfish, meat, babyfood
- **Fumonisins**
  - cereals
- **Trichothecenes**
  - cereals
- **Zearalenone**
  - maize, wheat
- **BaP**
  - oils, fats, fish, shellfish, meat, babyfood

Food law enforcement

Enforcement authorities
Sampling and analysis
Advice, or ultimately prosecution

Food industry
“due diligence”
BRC global standard
Independent audit

...But another law says

Whatever can go wrong, will go wrong

**Toxic levels of cancer agent found in crisps**

**Jars of Baby Food in Cancer Alert**
So

Concern about food safety issues

Food poisoning
Animal feed
Antibiotic residues
Fat
Sugar
Sudan I

International trade in food

What we want to achieve:

- chemicals in food do not compromise food safety
- appropriate controls, properly enforced
- open debate of issues amongst stakeholders
Globalisation of food trade

Herb Butter:
- Salted butter: UK, Ireland
- Garlic puree: China, USA, Spain
- Garlic salt: China, USA, Spain
- Lemon: USA
- Parsley: France, UK
- Pepper: Indonesia
- Water: - UK

Chicken Breast:
- Chicken: Ireland, Belgium, UK, France etc.

Batter:
- Flour: Belgium, France
- Water: UK

Bread Crumb:
- Bread crumbs: Ireland, UK
- Rapeseed oil: EU, Australia, Eastern Europe

Looking Forward

Our key aims include:
- Food safety
  - to continue to reduce foodborne illness
  - to reduce the risks to consumers from contaminated food

Food incidents

“Any event where, based on the information available, there are concerns about actual or suspected threats to the safety or quality of food that could require intervention to protect consumers’ interests.”
Incidents by category

1337 incidents Sept 05 – Aug 06

How can we prevent food incidents?

• Raise awareness
• Identify research needs
• Develop codes of practice
• Encourage targeted action
• Develop robust horizon scanning mechanisms
• Share intelligence
• Intelligence led enforcement

Informal information exchange

EU RASFF SYSTEM

INFOSAN

Incident prevention – Working in partnership