

FOOD SAFETY AND RISK ASSESSMENT BY SOUTH AFRICAN REGULATORS

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health

Department:
Health
REPUBLIC OF SOUTH AFRICA

CONTENTS OF PRESENTATION

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- **Legislative Mandate** of National Food Control Authorities in South Africa
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- Directorate: Food Control Approach to **Risk Assessment**



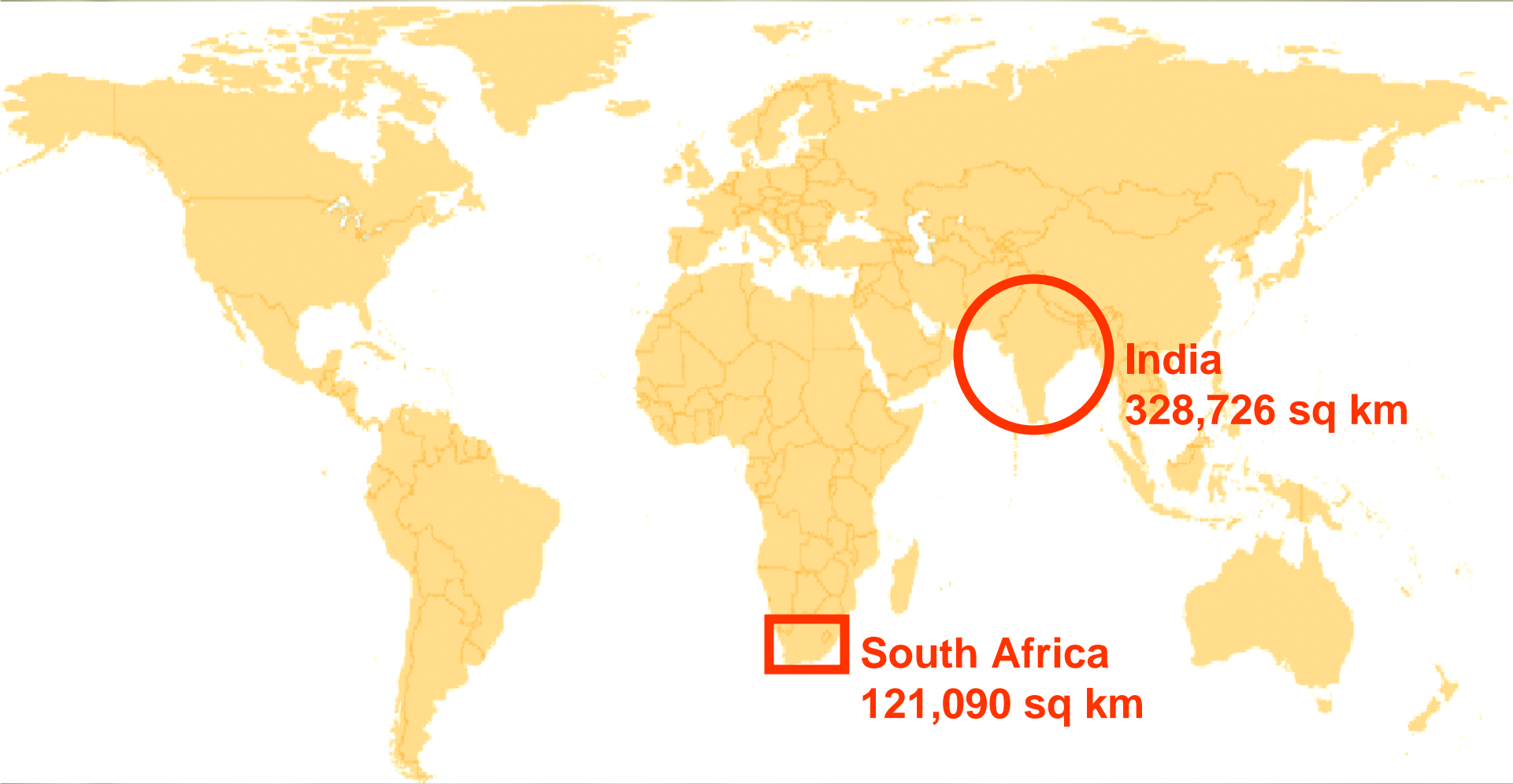
SHORT BACKGROUND ON SOUTH AFRICA



BACKGROUND ON SOUTH AFRICA

- Population: **approx. 48million**
- Demography: **Multi-ethnic, 11 Official languages**
- Main religious grouping: **Christian**
- Government structure: **3 tier, national, provincial (9) & municipal (52) levels**
- National GDP (2005): **\$240,152million**
- National GDP growth rate(2005): **4.9%**
- Agriculture contribution to GDP (2005): **3.05%**
- Food industry turnover (2005): **approx. \$20billion (18% of value of total manufacturing)**

BACKGROUND ON SOUTH AFRICA



LEGISLATIVE MANDATE OF NATIONAL FOOD CONTROL AUTHORITIES IN SOUTH AFRICA



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*HEALTH'S FOOD CONTROL
LEGISLATION: DEPARTMENT OF
HEALTH (DOH)*

**Foodstuffs Cosmetics and Disinfectants
Act, (Act 54 of 1972):**

- **Makes provision for the manufacture, sale importation and exportation of foodstuffs**
- **Administered by the Directorate: Food Control at national level**
- **Control of imported foodstuffs by 9 provinces**
- **Enforcement of local foodstuffs by 52 metro/district municipalities**

*DEPARTMENT OF HEALTH
DIRECTORATE: FOOD CONTROL*

MISSION:

The Directorate: Food Control ensures an optimal **non-personal preventative primary health care service** in respect of the **safety of food for the South African community**, based on basic needs and the right to make informed choices without being misled, **by means of scientifically founded legislation, auditing and information actions.**

MAIN FUNCTIONS OF THE DIRECTORATE: FOOD CONTROL

- **Support provinces and municipalities** on food law & monitoring
- **Inform, educate and communicate (IEC)**, food safety and related matters to stakeholders such as industry, consumers, media, etc.
- **Develop and publish legislation** relating to food safety, food labelling and related matters.
- **Evaluate agricultural chemicals** and food produced by means of **biotechnology**.
- Co-ordinate **food monitoring** conducted by provinces & municipalities, as well as **food safety alerts**.
- **National Contact Points** for the joint FAO/WHO Codex Alimentarius Commission, INFOSAN and RASFF.

NATIONAL CONTACT POINTS



AGRICULTURE'S FOOD CONTROL LEGISLATION: DEPARTMENT OF AGRICULTURE, FORESTRY & FISHERIES (DAFF)

- **Agricultural Products Standards Act, (Act 119 of 1990)** (quality/TBT & food safety standards for local/exports of food of plant origin)
- **Meat Safety Act, (Act 40 of 2000)** (abattoirs and import/export of fresh/chilled/frozen meat)
- **Animal Diseases Act, (Act 35 of 1984)** (permit required for import of meat/meat products)
- **Plant Protection related Acts** (phyto-sanitary requirements)

(National and/or Provinces involved in enforcement, as well as Perishable Products Export Control Board (PPECB) appointed as assignee to conduct physical inspections of perishable products of plant origin exported from South Africa)

*NATIONAL REGULATOR FOR
COMPULSORY SPECIFICATIONS (NRCS)
(formerly the SABS and falls under
Department of Trade and Industry (DTI))*

Division: Food and Related Industries:

- **Enforces Compulsory Specifications and the relevant provisions of FCD Act 54 of 1972 for canned meat & fish products and frozen sea foods**
- **Exercises import/export control over these products and is recognized by the European Union (EU) and certain other countries as the competent authority for certifying exports of fish and fishery products**

***DIRECTORATE: FOOD CONTROL
LEGISLATION APPLICABLE TO
SPICES, INCLUDING
CONDIMENTS***



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new

- Categorizing of Regulations **(click here)**
- Regulations Related to All Bottled Waters: Draft Amendments – R.800/2009 (PDF)
- Regulations Governing Tolerance for Fungus-produced Toxins: Amendment – R.751/2009 (PDF)
- Regulations Relating to Foods for Infants, Young Children and Children: Draft Amendment - R.752/2009 (PDF)
- Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972) - Updated version (PDF)

Objective:

The Directorate: Food Control ensures an optimal non-personal preventative primary health care service in respect of the safety of food for the South African community based on basic needs and the right to make informed choices without being misled by means of scientifically founded legislation, auditing and information actions.

Functions of the Directorate

The main functions of the Directorate: Food Control, *inter alia*, include:

- Administer, compile and publish legislation relating to food safety, food labelling and related matters.
- Initiate, coordinate and evaluate general as well as more specific food monitoring programmes.
- Audit and support provinces and local authorities with food law enforcement.
- Inform, educate and communicate (IEC) food safety and related matters to stakeholders such as industry, consumers and other departments.
- Act as the national contact point for the joint FAO/WHO Codex Alimentarius Commission.
- Evaluate agricultural remedies and chemicals and food produced by means of biotechnology.

National and International Liaison

For the purposes of its regulatory activities, the Directorate is advised by the Food Legislative Advisory Group (FLAG). This non-statutory body is composed of representatives of academic and research institutions, the food industry, consumer and professional organisations, other government departments and provincial health authorities.

The Directorate also plays an active role on committees and bodies such as:

- The joint FAO/WHO Codex Alimentarius Commission
- The South African Committee on Phytosanitary (SPC) Committee

FOODSTUFFS, COSMETICS AND DISINFECTANTS (FCD) ACT, 1972 (ACT 54 OF 1972) AND RELATED REGULATIONS

**Controlling the sale, manufacture, importation and
exportation of Foodstuffs**

Approximately **50** sets of Regulations divided into
13 Categories, of which **10** sets of the Regulations
are directly/indirectly applying to **Spices,**
including Condiments

FCD ACT 54/1972: REGULATIONS APPLICABLE TO SPICES, INCLUDING CONDIMENTS

- Regulations Governing Tolerance for **Fungus-produced Toxins** in Foodstuffs (R.1145/2004)
- Regulations Governing **Microbiological Standards** for Foodstuffs and Related Matters (R.692/1997)
- Regulations Governing the Maximum Limits for **Pesticide Residues** that may be Present in Foodstuffs (R.246/1994)
- Regulations Relating to **Irradiated Foodstuffs** (R.1600/1983)
- Regulations Governing **General Hygiene Requirements for Food Premises** and the **Transport of Food** (R.918/30 July 1999) (**Certificate of Acceptability**)

FCD ACT 54/1972: REGULATIONS APPLICABLE TO SPICES, INCLUDING CONDIMENTS

- Regulations Relating to **Anti-caking Agents** and the amounts thereof that may be used in Foodstuffs (R.2507/1982)
- Regulations Governing **Emulsifiers, Stabilizers and Thickeners** and the amounts thereof that Foodstuffs may contain (R.2527/1987)
- Regulation Relating to Food **Colourants** (R.1008/1996)
- Regulations Governing **Acids, Bases and Salts** and amounts thereof that Foodstuffs may contain (R.115/1986)
- Regulation Related to Restriction on the Sale of **Food Additives containing Nitrite and/or Nitrate** and other Substances (R.219/1975)

DIRECTORATE: FOOD CONTROL APPROACH TO RISK ASSESSMENT



STRUCTURE OF RISK ANALYSIS



RISK ASSESSMENT APPROACH

- **Adopt/Adapt risk assessments conducted by FAO/WHO bodies supporting Codex e.g. JECFA**
- **Conduct Toxicological Assessments/Evaluations of Agricultural Chemicals/GMO's registered by DAFF, set National MRL's e.g. pesticides, vet drugs**
- **Ensure National RA bodies follows Codex RA Guidelines e.g. GM Scientific Advisory Committee**
- **Ensures appointment of scientific experts on National RA bodies e.g. Allergen Expert appointed on GM Scientific Advisory Committee**
- **Utilize INFOSAN assistance regarding rapid risk assessments e.g. Melamine, Cadmium in pineapple products**



WHO



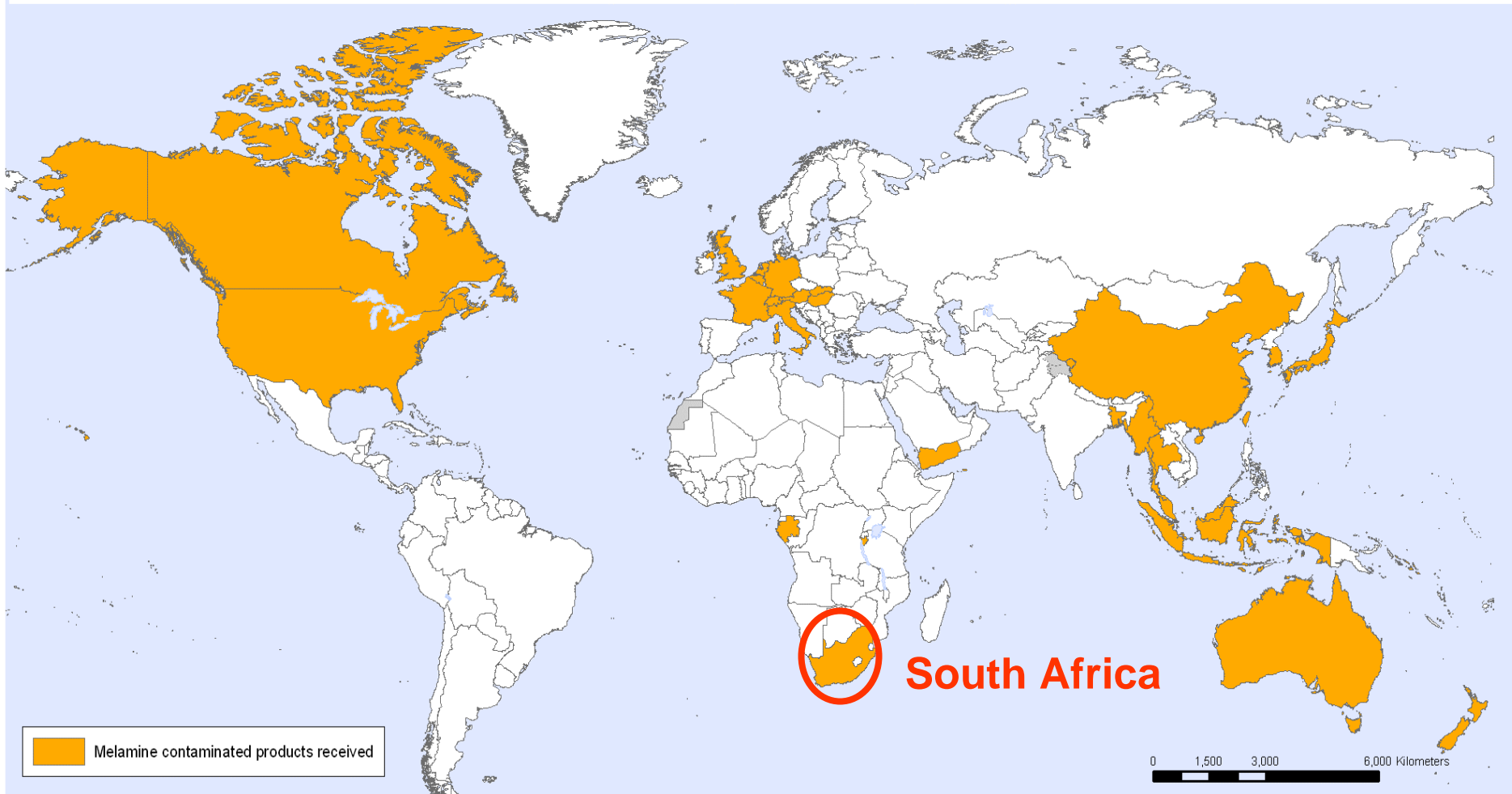
In cooperation with FAO

WHAT IS INFOSAN?

A global network of national food safety authorities that...

- **Promotes the rapid exchange of information during food safety related events**
- **Shares information on important food safety related issues of global interest**
- **Promotes partnership and collaboration between countries, and between networks**
- **Responds to requests for assistance during international food safety events**
- **Helps countries strengthen their capacity to manage food safety risks**

Country received melamine contaminated products



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Health Organization
Map Production: Public Health Information
and Geographic Information Systems (GIS)
World Health Organization



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OTHER PRODUCTS CONTAMINATED

- milk (powder), yoghurt, biscuits, instant & liquid coffee preparations
- egg powder, fresh eggs, animal feed
- Sodium bicarbonate (raising agent)
- Exports reported all over the world



TECHNICAL ASSISTANCE: MELAMINE CONTAMINATION OF INFANT FORMULA

- Melamine added in the primary production sector (milk collection centres) to disguise diluting milk with water
- 22 of 79 Chinese powdered infant formula producers affected
- Products from affected producers exported to 5 countries
- Levels detected range from <0.1 – 2600 mg/kg



**>294000 children
ill**

**>50000
hospitalized**

6 deaths

Melamine Incident
Detention Order &
Sampling Imported/
Local products
(containing milk)



Detected
(within limits)



Detected
(Outside limits)

Lifted Detention
Order

Meeting to obtain
Info/co-operation
from Industry

Manufacturer
Informed

Informed
INFOSAN,
Neighbouring
SADC
Countries



DoH requested
Industry Recall

Health authorities
Informed

Industry reluctant:
"Product not injurious
to health-
just outside limits"

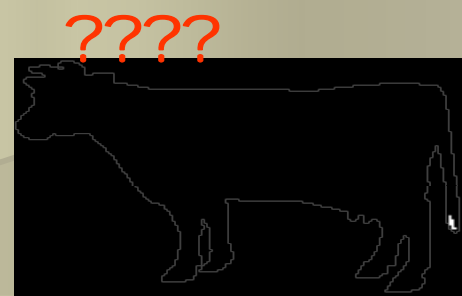
Seized,
Condemned,
Destroyed

Not Detected

Lifted Detention
Order

Industry instituted
Recall

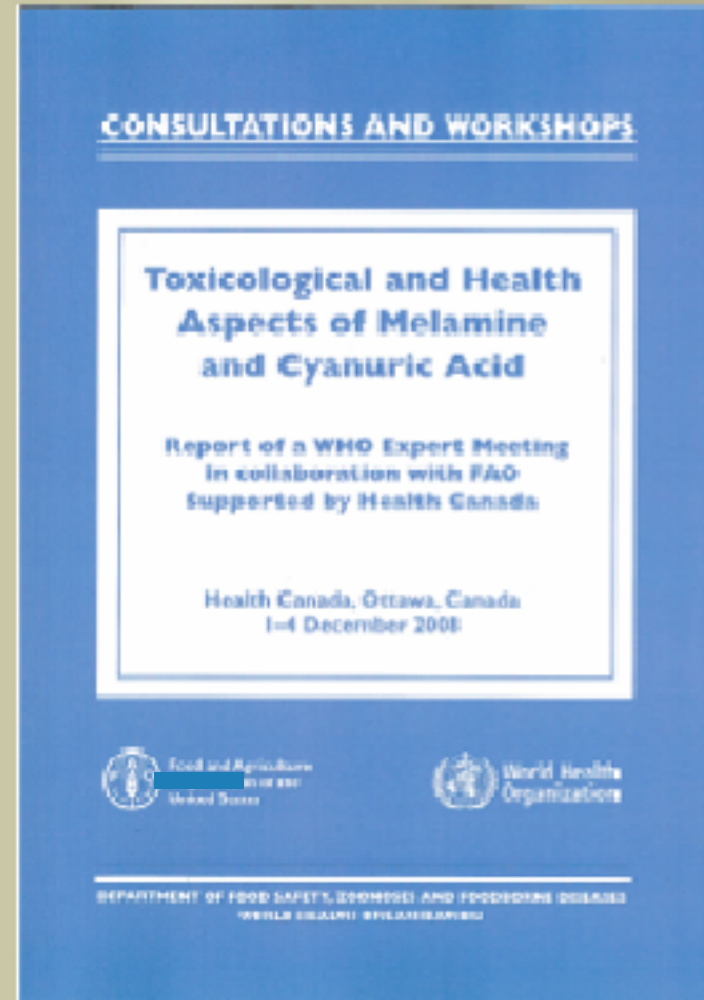
Media obtained/
published info



Technical Consultation on Melamine

Objectives

- Review current knowledge
 - Chemistry
 - Analytic methods
 - Occurrence in food and feed
 - Toxicity
 - Estimated dietary exposure
 - **Health risk assessment**
- Identify knowledge gaps to guide research



FOODSTUFFS, COSMETICS AND DISINFECTANTS ACT, 1972 (ACT 54 OF 1972)

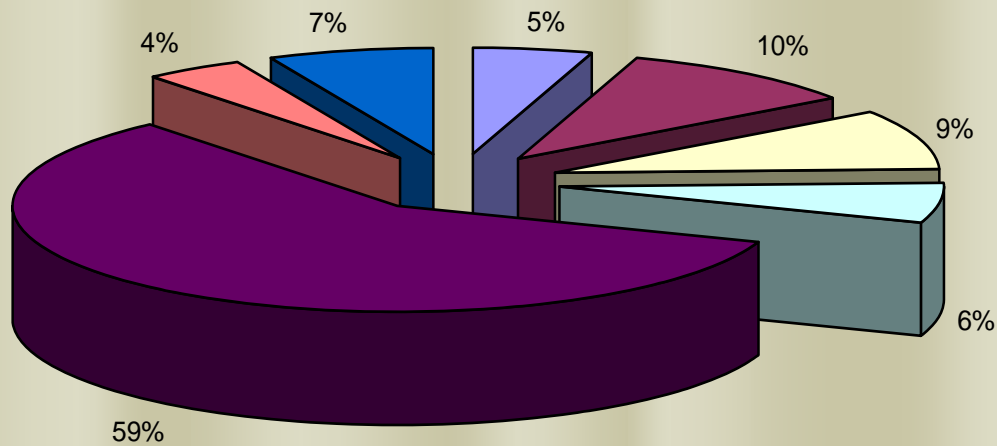
Regulations Relating to Maximum Levels for Melamine in Foodstuffs (R.1054 of 6 November 2009)

- (a) All foodstuffs which contain more than 2.5 milligrams per kilogram melamine;**
- (b) All infant formulas, foodstuffs intended for children under 36 months of age and foodstuffs for special dietary uses, which contain more than 1 milligram per kilogram melamine.**

RISK ASSESSMENT APPROACH

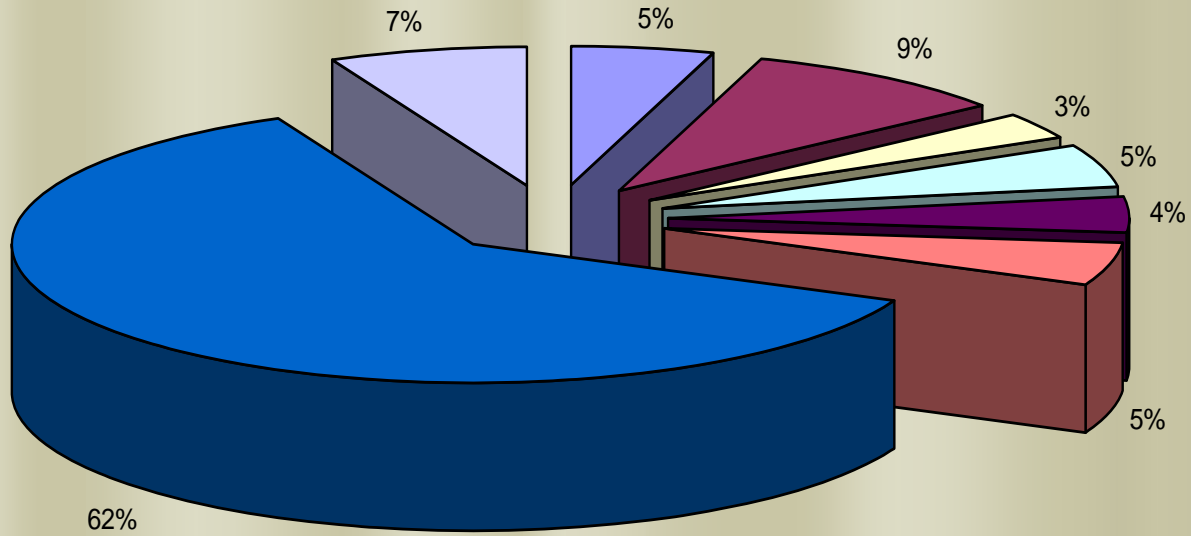
- Provision made in National Legislation to recognize standards set by reputable bodies/ countries e.g. MRL's of Codex and EU
- Responding to information/requests received from Food Industry representative bodies e.g. SAAFoST, CGCSA, ILSI
- Analyzing Notifications received from International Food Safety Alert Systems related to exports from South Africa, as well as National Food Safety Alerts
- Responding to information made available by the media, internet, consumer bodies etc. (horizon scanning)

% RASFF notifications per food category (Total SA notifications = 98)



- Cereals and bakery products
- Fish and products thereof
- Fruit and vegetables
- Herbs and spices
- Nuts, nut products and seed
- Poultry meat and poultry products
- Other (all with 1% or less)

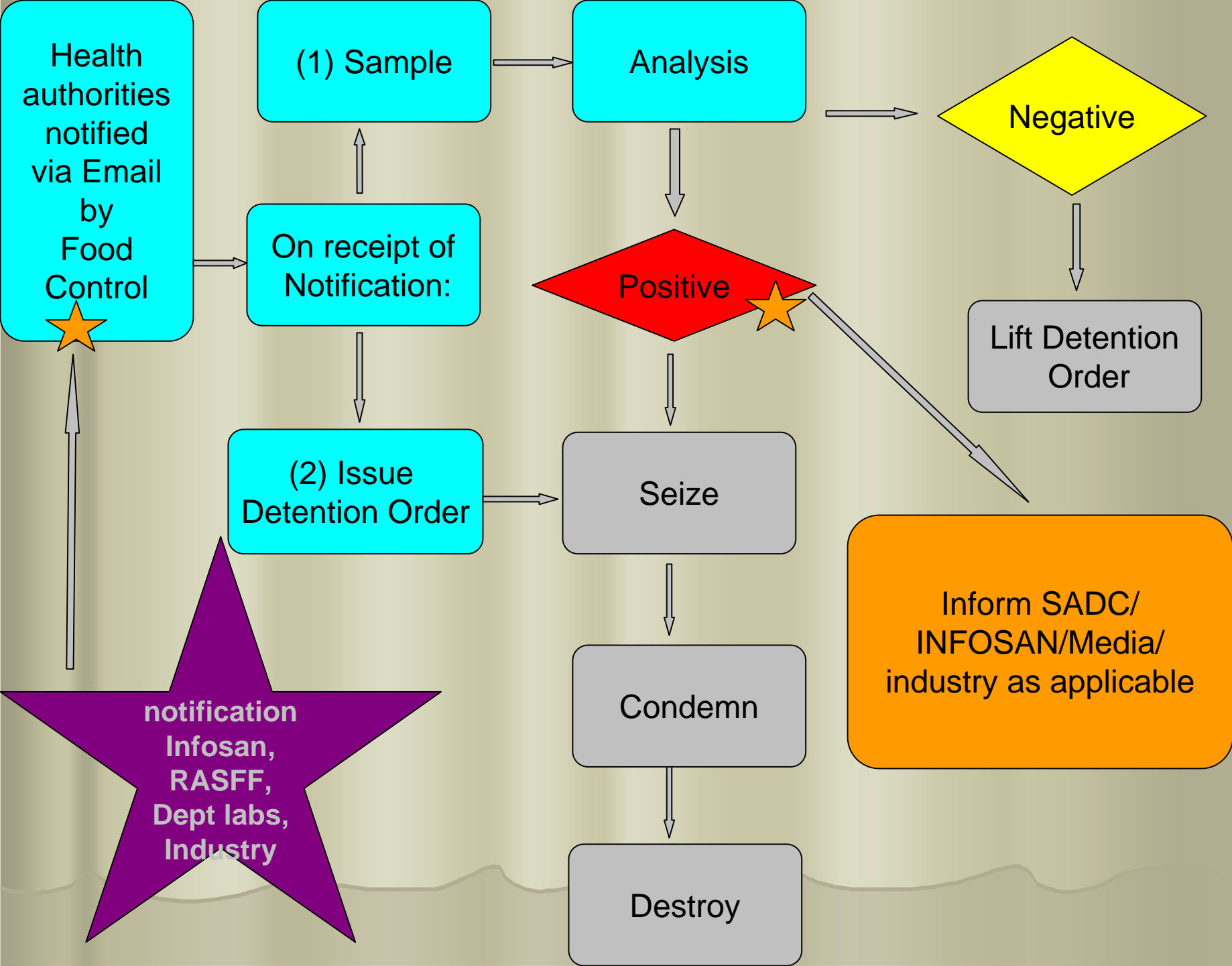
% RASFF notifications per food safety issue (Total SA notifications = 98)



- Temperature
- Colourant
- Bacterial contamination
- Heavy metals
- Additives
- Pesticides
- Aflatoxins
- Others (labelling, unauthorised irradiation, contaminants, defective packaging, unlabelled irradiation, melamine and illegal import)

SOME OF SOUTH AFRICA'S RECENT FOOD SAFETY ALERTS/ PROBLEM FOODSTUFFS

- **Aflatoxin**-Local/Exports peanuts & peanut butter (RASSF & FC)
- **Sudan Red** in chili powders/spices (Media)
- **Labeling** of Dried Fruit Stick containing SO₂ (FC)
- **Melamine** in Milk & Dairy Products (INFOSAN & FC)
- **Bisphenol A** in plastic baby bottles (Media & Internet)
- **Dioxins** in Pork & Pork Products (INFOSAN)
- **Antibiotics** in Honey (Port Health)
- **Micro-nutrients** in Infant Formulae (Industry)
- **Dioxins** in Mozzarella Cheese imported from Italy (Media & Industry)



RISK ASSESSMENT APPROACH

- Provision made for inclusion of standards set by reputable bodies/countries in National Legislation e.g. MRL's of Codex and EU
- Responding to information/requests received from Food Industry representative bodies e.g. SAAFoST, CGCSA (FSI), ILSI
- Analysis of Notifications received from International Food Safety Alert Systems related to exports from South Africa e.g. RASFF and National Food Safety Alerts
- Responding to information made available by the media, internet, consumer bodies etc. ('horizon scanning')

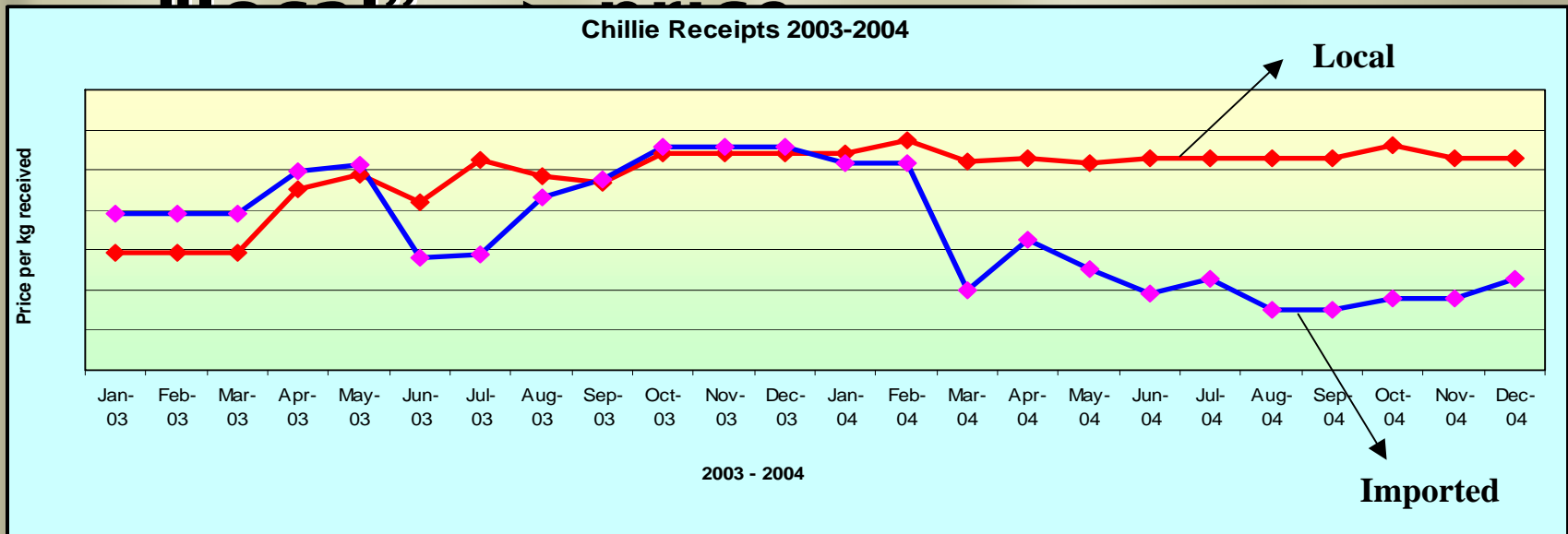
FCD ACT 54/1972: REGULATIONS APPLICABLE TO SPICES

- **Regulations Relating to Colourants in Food (R.1008/1996):**
 - Lists permissible colourants
 - Sudan Red is not listed for use in spices

NB!! The use of the colourant Sudan Red in spices is thus ILLEGAL in South Africa!!

March 2005 – Sudan 1

Belief: certain suppliers mixing local with (cheaper) imported chillies/chillie powder and sold as “local”



Contributing factor?

March 2005 – Sudan 1

Direct cost to SA's largest spice company:

Losses close to 8 figures!!

Indirect cost:

- Loss of sales
- People & travel costs
- Loss of consumer confidence
- Damage to brand

March 2005 – Sudan 1

Other Results

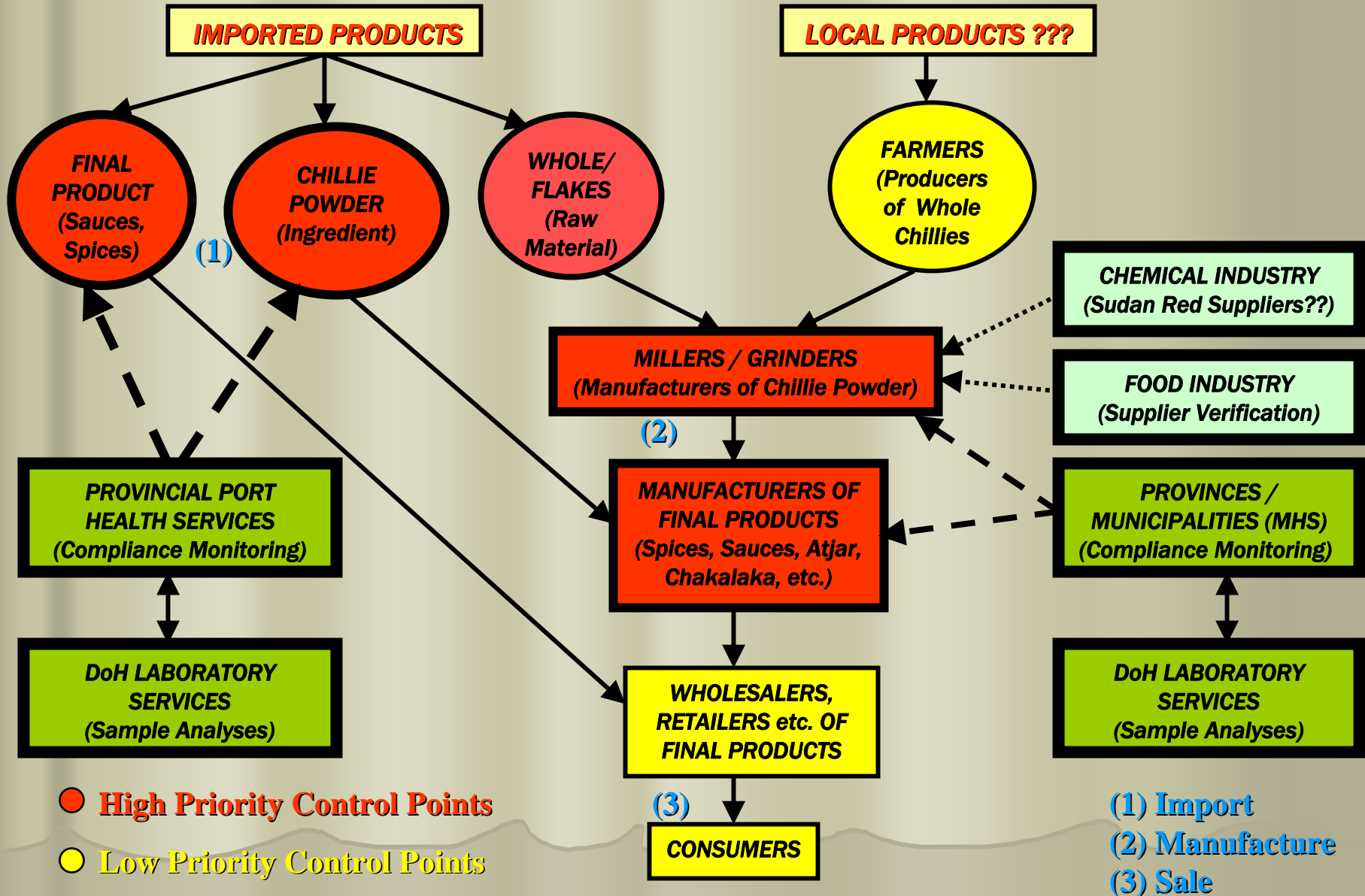
- Loss of consumer confidence in government as agent to protect consumer
- Loss of consumer confidence in food industry → food industry is lying & “out to poison / defraud consumer”
- Newspapers protect consumer
- Birth of CGCSA *Food Safety Initiative* in response to Sudan Red *and* other issues

March 2005 – Sudan 1

Other Results

- **Indian Spice Board co-operated:**
 - Increased testing
 - Improved Certificates of Analysis
 - Commitment to Sudan-Red free exports
- **Local spice industry took action**
- **CGCSA *Food Safety Initiative* leadership in assuring consumers of cleaning up industry in 90 days**
- **Port Health started checking consignments (local products ???)**

**FOODSTUFFS COSMETICS & DISINFECTANTS ACT (ACT 54 OF 1972):
SUDAN RED MONITORING - SUPPLY CHAIN OF CHILLI POWDER & FINAL PRODUCTS**



March 2005 – Sudan 1

Four NB lessons learnt:

1. Sudan Red not homogenously mixed into chillies
2. Imported chillies not the only danger
3. Sudan Red contamination not limited to powdered chillies (also whole chillies/chillie flakes involved – only in SA!!)
4. Lab capacity in SA extremely limited iro Sudan Red testing

March 2007 – Sudan 2

- Direct cost to largest spice company:

Close to 7 figures!!

Media was wrong!!!

(could not verify results/tests of laboratory used)

Results:

- Consumer thoroughly confused + heightened awareness
- Spotlight on food safety and food in general in SA by media (much unwarranted)
- Industry has no *standard* for tests, methods, labs

3 WORKSHOPS CONDUCTED ON SUDAN RED IN FOODSTUFFS

'Lessons learnt from Sudan I & II'

***(Presented in 2007/08 in Rustenburg,
Cape Town and Durban)***

Presented by

**Department of Health
Directorate: Food Control**

**Consumer Goods Council of SA
Food Safety Initiative (FSI)**



PURPOSE OF THE WORKSHOPS:

That **relevant stake holders (e.g industry, Government)**, take steps to ensure that the **contamination of chillie powders/products with the illegal colourant, Sudan Red, is prevented**, in the interest of **consumers' health** and to protect the **reputation of the South African food industry**, by **preventing a repeat of the incidents** that happened in 2005 and 2007