



# Moving Food Across the World

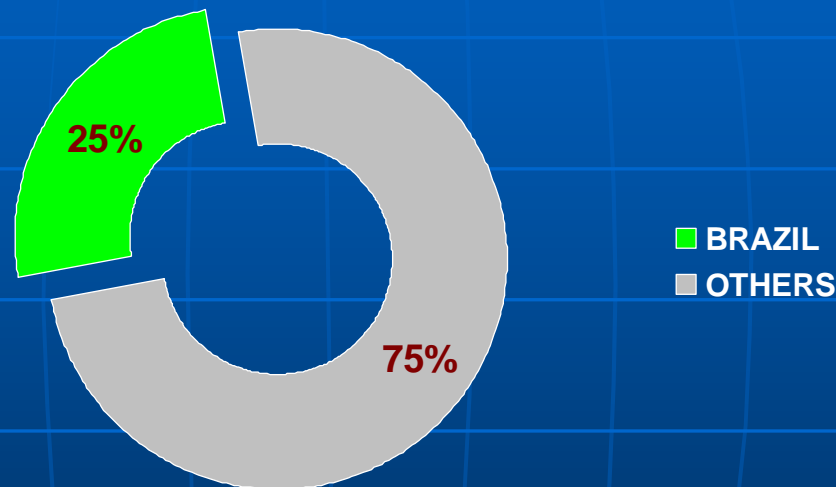
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Quality Manager – International Market  
Company Sadia

# Overview

- Brazil and the Global Trade
- Sadia and the Global Trade
- Food Safety on a business perspective
- Export: the decision tree
- Basic approaches in all markets
- Some "Food Safety" issues
- The Challenges of Food Safety in a Global Food Supply
- Overcoming the challenges

# Brazil and the Global Trade

Contribution in the Imports of the main Agribusiness Importers (1).

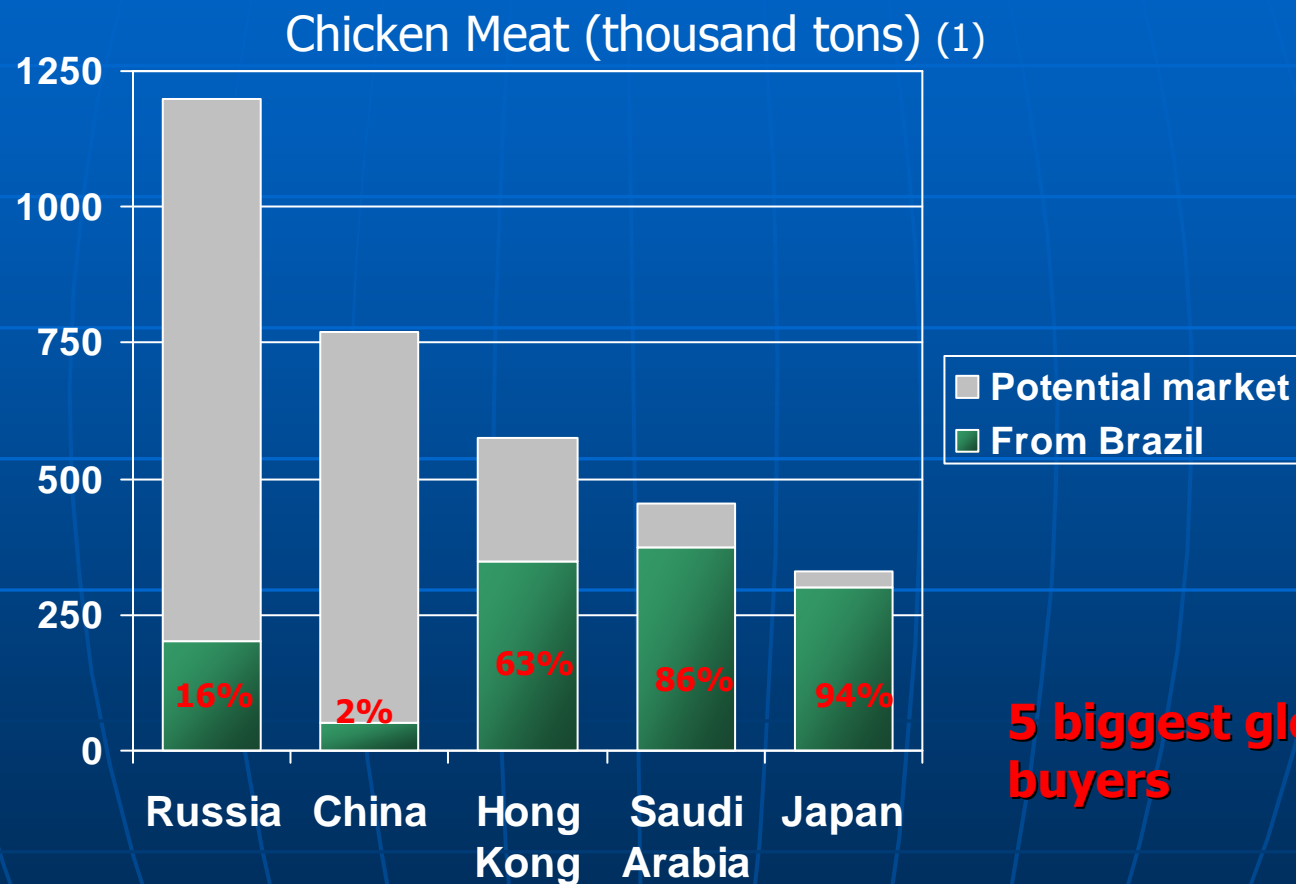


**(1) Importers:** European Union, Japan, China, United States, Russia, Mexico, South Korea, Canada, Indonesia, Taiwan, Saudi Arabia, Iran, Egypt, Hong Kong, Argelia.

**Products:** 11 of the main products exported by Brazil including: sugar, coffee, beef, pork meat, chicken and turkey meat, corn, soy, and orange juice.

Source: Brazilian Ministry of Agriculture, Exame Melhores e Maiores, July 2009

# Brazil and the Global Trade



(1) Not including Food Processed Products

Source: TradeMap and Comtrade/ONU elaboration: DPI/SRI/Mapa, 2007 data.

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# Sadia and the Global Trade

Chicken slaughter (million heads/year)	813
<i>Chicken products production (thousand tons/year)</i>	<i>1.105</i>
Turkey slaughter (million heads/year)	28
<i>Turkey products production (thousand tons/year)</i>	<i>218</i>
Pork slaughter (million heads/year)	5
<i>Pork products production (thousand tons/year)</i>	<i>467</i>
Employees	60.580
Industrial Units	18
Integrated poultry farmers (thousand)	6.9
Integrated pork farmers (thousand)	3.2

Source: Sadia's Annual Report 2008

## Sadia -Production Units



# About Sadia

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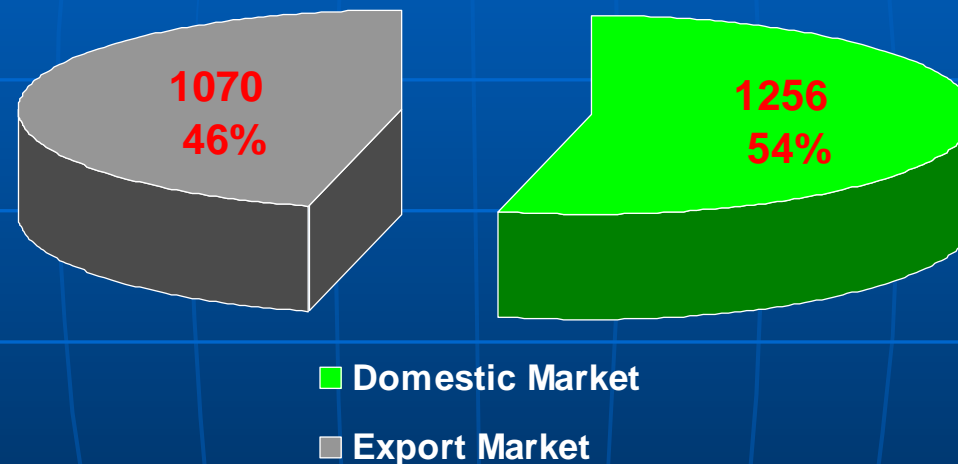
SADIA - International Commercial  
Offices



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# Sadia and the Global Trade

Sales volume (thousand tons, %)

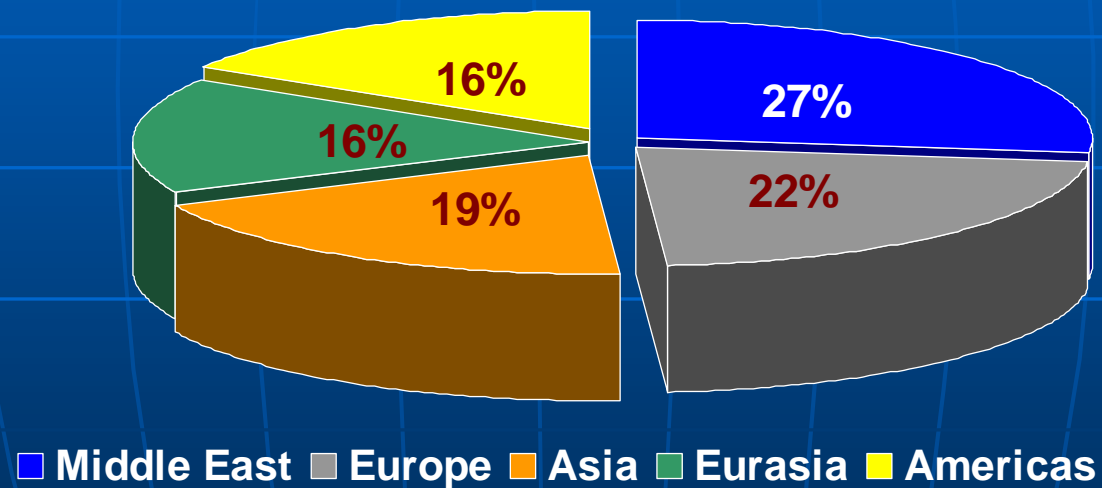


Source: Sadia's Annual Report 2008



# Sadia Export Breakdown

## Revenues



Source: Sadia's Annual Report 2008

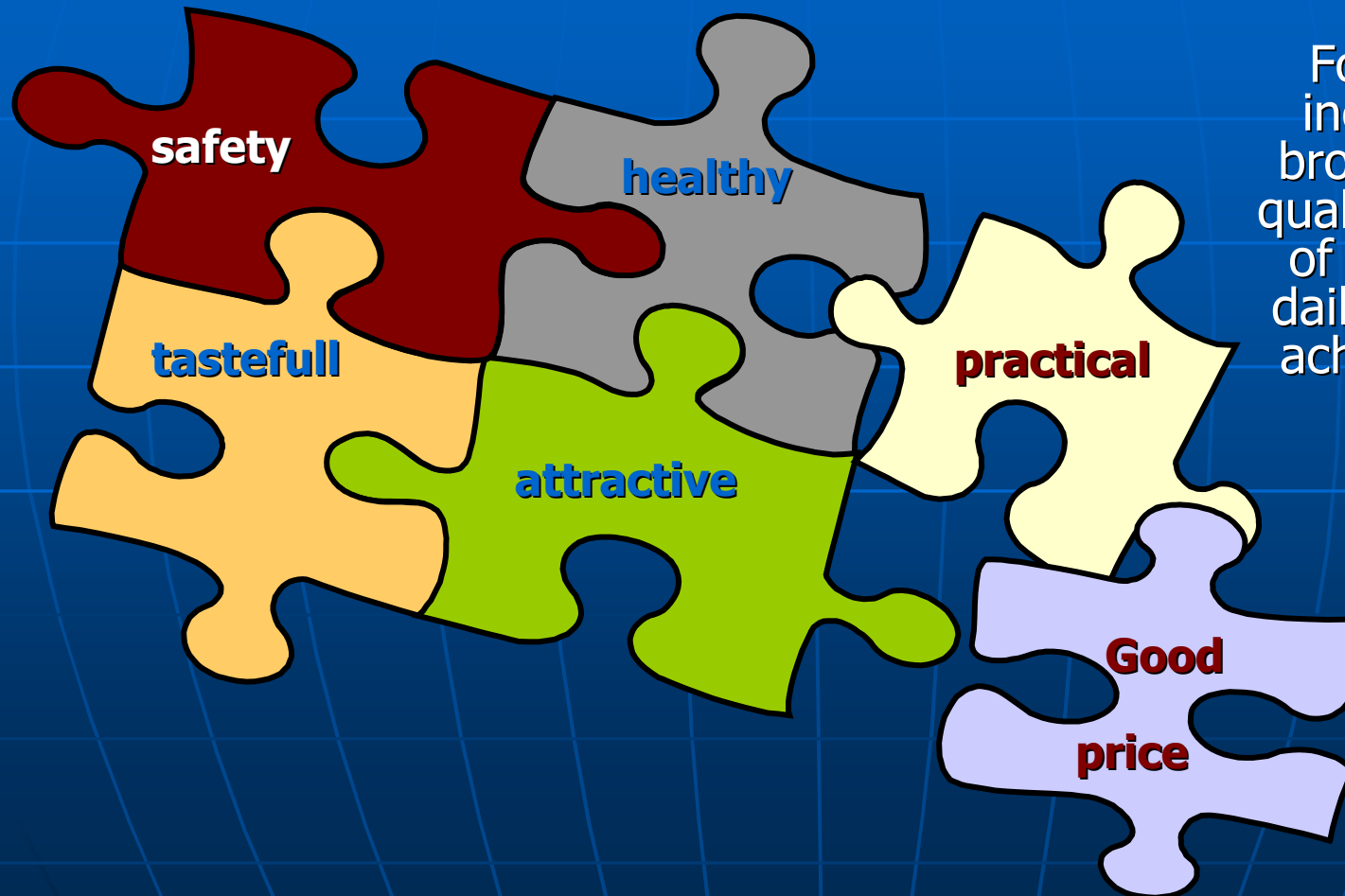
# Sadia and the Global Trade

Around **1000** products exported to more than **100** countries.

Chicken, turkey and beef meat and products, pastas, margarines and desserts.



# Food Safety on a business perspective



Food Safety is included in the broad concept of quality. The puzzle of Quality is our daily challenge to achieve different markets.

# Food Safety on a business perspective

Different perceptions

Confidence / Trust



Demonstration of  
capacity



Exporter <Global Players>, Local  
Main Producers <Market Leaders>

Local producer

New Exporters

# Food Safety on a business perspective

Different perceptions



(1) The Speed of Trust – Stephen Covey

# Food Safety on a business perspective

## Quality System Certifications

### Retails in UK

- BRC (British Retail Consortium)

### Retail in German

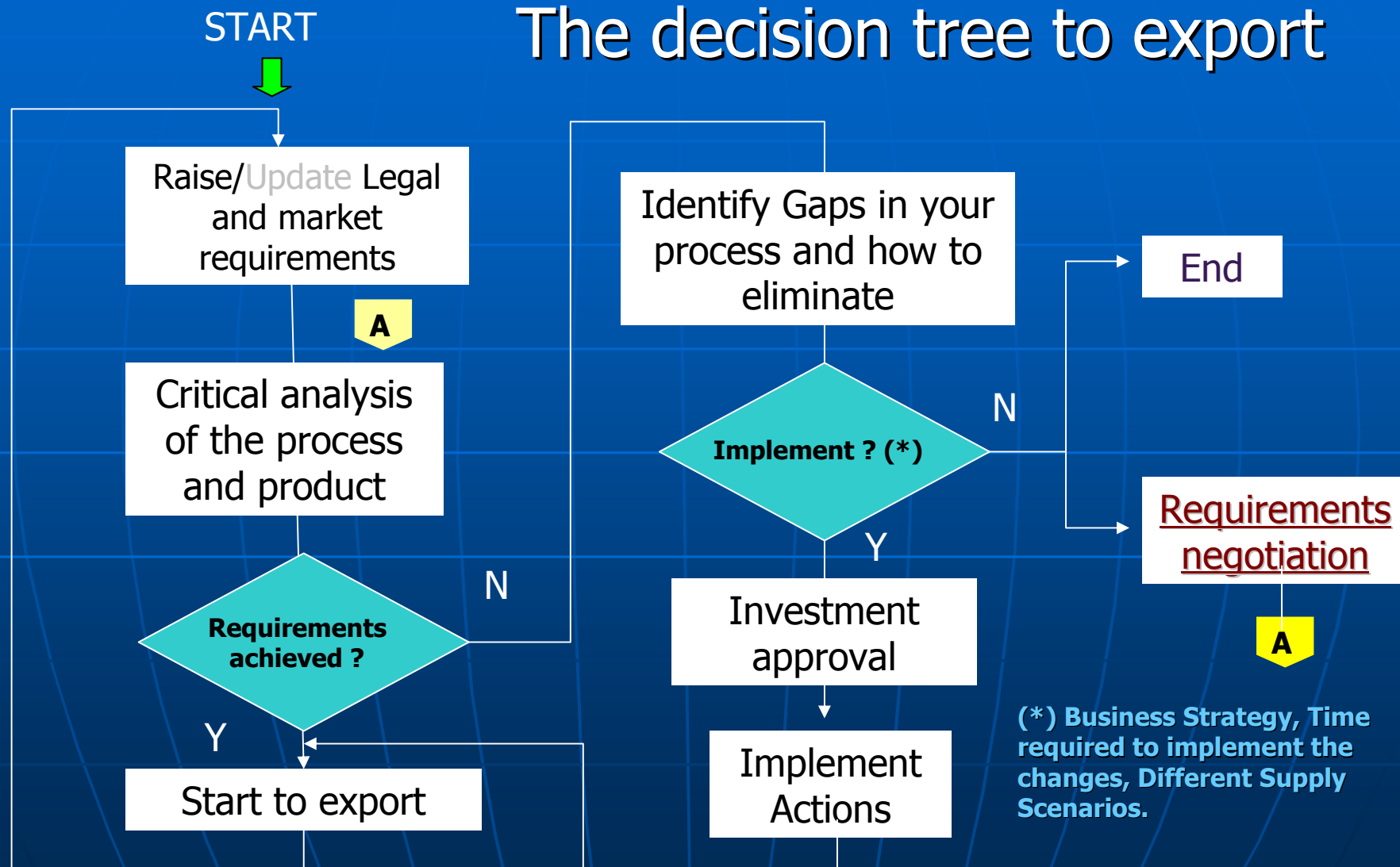
- IFS (International Food Standard)
- QS (Qualitätssicherung)

### Global players

- Own List of requirements

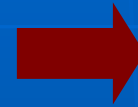


# The decision tree to export

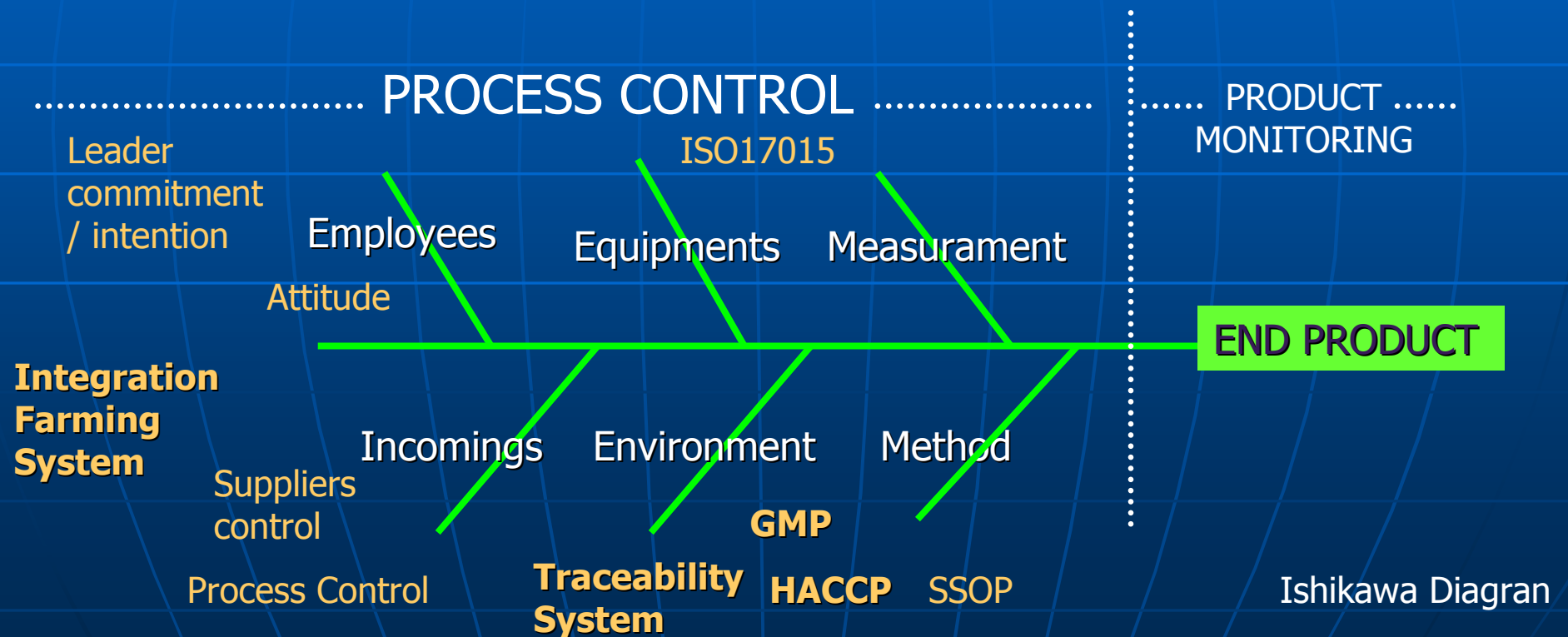


# Our Basic approaches in all markets

## FOOD SAFETY



Absence of physical,  
chemical and  
microbiological hazards





## Some "Food Safety" issues around the world

MARKET	PRODUCT	ISSUE	WHAT WE DO/DID
EU	Fresh poultry X Poultry Preparation	<p><b>Commission Regulation 2073/2005</b></p> <p><b>Salmonella sp absence/25g (n=5; c=0)</b></p> <p><b>ONLY FOR Poultry preparation</b></p> <p><b>FOR Fresh Poultry not established</b></p>	<p><b>Implement controls to achieve the most strict limit for both categories; promote scientific discussions over this topic; be prepared to implement tools that improve process.</b></p>

## Some "Food Safety" issues around the world

MARKET	PRODUCT	ISSUE	WHAT WE DO/DID
RUSSIA	Frozen raw poultry parts	SanPin 2.3.2 1078-01 > <i>Listeria monocytogenes</i> absence in 25g	It has been considered sampling in deep muscle
SINGAPORE	Frozen meat cuts	Directive 2000/1 > AVA Agri/Food and Veterinary Authority > <i>Coagulase +ve Staphylococcus aureus</i> > m=100 CFU/g, M= 500 CFU/g; n=5; c=2	Meeting between exporters, AVA Singapore and MAPA Brazil – criteria agreed: m= 500CFU/g, M=1000CFU/g still to be published

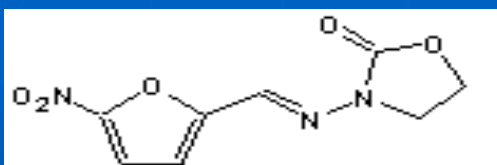
## Some "Food Safety" issues around the world

MARKET	PRODUCT	ISSUE	WHAT WE DO/DID
NETHERLANDS	Frozen poultry parts	<b>Campylobacter sp</b> request of incoming control	Provide a technical explanation on the risk considering transit time overseas (1 -2 months) and possible initial contamination
JAPAN	All	Japan Positive List for <b>residues (MRLs)</b> Veterinary Medicines producers not able assure MRLs established	Field trials and lab tests
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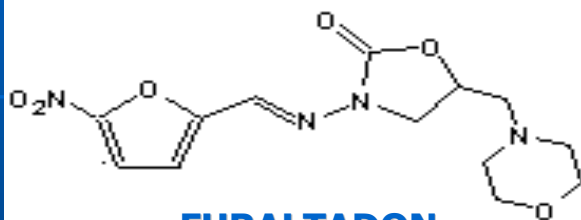
# Some "Food Safety" issues around the world

## NITROFURANS

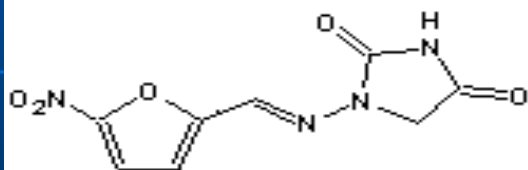
PARENT DRUG



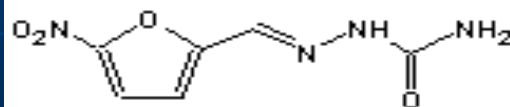
**FURAZOLIDON**



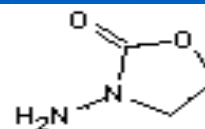
**FURALTADON**



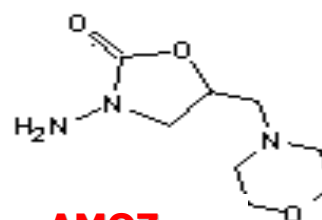
**NITROFURANTOINE**



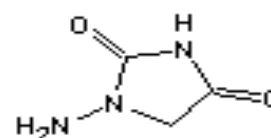
**NITROFURAZON**



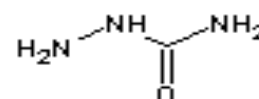
**AOZ**



**AMOZ**



**AHD**



**SEM**

METABOLITE

## Some "Food Safety" issues around the world

### NITROFURANS

- inexpensive and effective veterinary medicines which were widely used in intensive farming of pigs, poultry, fishes, and shrimps.
- Parent compounds degrade rapidly in the treated animal and metabolites are stored in the tissue and products for weeks.
- Studies have found that these metabolite residues are very stable, have a long half life and do not degrade significantly during cooking or processing.
- Both the nitrofurans as well as metabolites have been classified as genotoxic compounds.

2001: established a method to detect nitrofurans metabolites (LC/MS/MS).

2001/2002: Disruption in Food Trade, exports dropped causing significant economic losses

## Some "Food Safety" issues around the world

### NITROFURANS

- Listed in Annex IV of Council Regulation EEC No. 2377/90 as no maximum residue limit (MRL) could be fixed either due to a lack of data or because the toxicological data did not support the derivation of an acceptable daily intake (ADI). **Zero tolerance.**

### What we did?

- 1) **Immediately implemented an orientation program and audits of our Integrated farms.**
- 2) **Approved an emergency plan to purchase the technology to control the residues – metabolites – LC/MS/MS.**
- 3) **Capacitation of our Laboratory team on the detection method. (travel to the Lab that developed the method in Ireland; method implementation assisted by an specialist from EU of a Lab that was was running the method).**
- 4) **Implemented a positive release of 100% of the exports (per farm) -now we have a monitoring Program in place.**

## Some "Food Safety" issues around the world

### Nicarbazine (coccidiostatic):

CODEX, Japan, Brazil, UK: 200 ppb

Italy, Germany, Belgium: zero tolerance

France, Netherlands: 100 ppb

### What we do?

No use for EU market until the MRL are established.

## Some "Food Safety" issues around the world

Shelf Life of frozen poultry meat and products.

A Food Safety issue?

No, in this case it is a consumer quality perception issue.

„Freezing keeps product safe almost indefinitely,  
recommended storage times are for quality only“ *USDA/FSIS,*  
*Food Safety Information Oct/2005.*



# The challenge of Food Safety in a Global Food Supply

Different knowledge and understanding about Food Safety

Different legal and market demands  
Ex.: LMO absent in raw meat

Different legal production process criteria  
Ex.: use of antimicrobials like chlorine in the chiller

More strict microbiological criteria

New scenarios of food supply  
Ex.: export of chilled meat

Different hazards and risks to be considered

# The challenge of Food Safety in a Global Food Supply

Access and interpretation of local legal requirements

Russian law SanPin > only in Russian; doubts are rarely discussed

The evolution of technology determine constant gaps on food safety issues

> LC/MS/MS Liquid Chromatograph/Mass Spectrometry/Mass Spectrometry

Food Safety evolution not following Technology evolution.

Access to clear official information > border controls

not transparent and clear information, no opportunity for discussion:

information of the samples, the methods, and even the results in a

technical way to promote an investigation and correction to avoid new

incidents. Ex:> Too high counts of Coagulase +ve Staphylococcus aureus,

presence of Bacterias of the intestinal group identified.

## How we are overcoming the challenges

- Assure a **technical team** updated and prepared to **promote** the understanding of the different food safety issues in each market of interest
- Implement an efficient **process to internalize** Food Safety demands
  - Capture
  - Interpretation
  - and implementation > clear objectives, clear implementation strategy, and enough source of financing
- Establish a **Net of Consultants** in the main markets to provide strategic advices on Food Safety and supporting technical discussion in case of disputes
- Implement an efficient **Quality System** involving all areas of company and all stakeholders<from the President to the Suppliers>that contribute to the Food Safety of the products



**Thank you for your attention**