

Household nutrition and safe livestock products

**Livestock Markets, Animal Source Foods and Human Nutrition:
*Considering Tensions, Maximizing Impact and Avoiding Harm***

October 17th, 2016
Washington DC



Delia Grace
Program Manager Food Safety & Zoonoses
Flagship Leader Agriculture associated disease

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Agriculture for
Nutrition
and Health

FOOD SAFETY IN DEVELOPING COUNTRIES: AN OVERVIEW

A learning resource for DFID Livelihoods Advisers



Delia Grace, October



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Review

Food Safety in Low and Middle Income Countries

Delia Grace

Program Leader Food Safety and Zoonoses, International Livestock Research Institute, P.O. Box 30709, Nairobi 00100, Kenya; E-Mail: d.grace@cgiar.org; Tel.: +254-20-422-3460; Fax: +254-20-422-3001

to Franz and Oliver Schlüter

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FOOD SAFETY AND INFORMAL MARKETS

Animal Products in Sub-Saharan Africa



disease (FBD) in low and middle income countries. Recent studies in recent years have broadened our understanding of FBD disease comes from biological hazards; and, in developing country consumers are concerned about the safety of fresh, perishable foods sold in informal markets. In LMICs as the result of massive increases in the production of fresh, perishable foods (and fish products and produce) and lengthening and intensification of agricultural production is a strong trend, modern retail have not demonstrated clear advantages. There is limited evidence on effective, sustainable and food safety in domestic markets. Training farmers on benefits those farmers trained, but has not been scalable practices are linked to eligibility for export. Training receive business benefits from being trained has been growing public concern and increased emphasis on food safety.

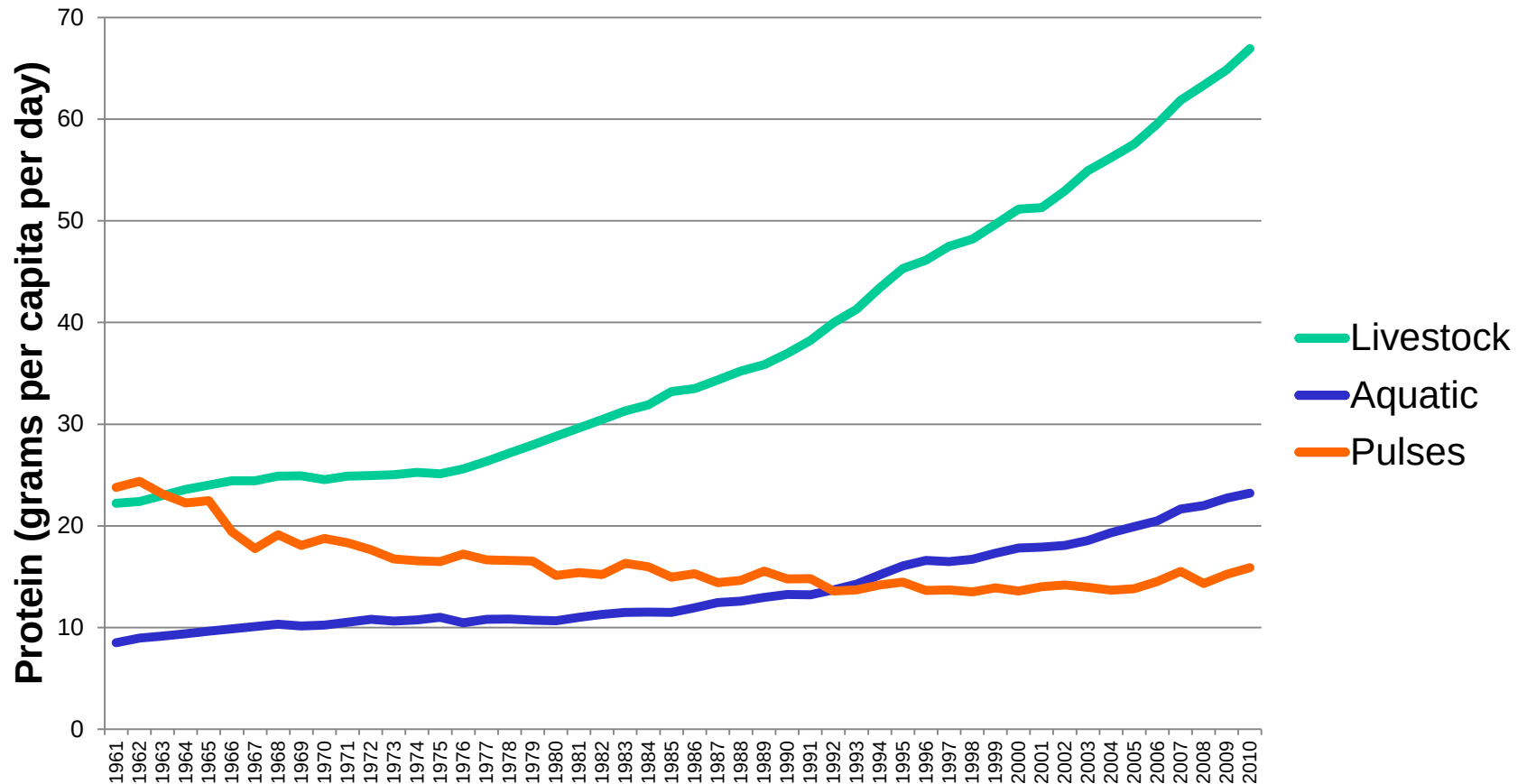
by; health burden

issue. The full health effects, as well as the full economic and the global impact on health, trade, and development is

Edited by
Kristina Roesel and Delia Grace

editions
from Routledge

Livestock food and nutrition



FAOStat

Protein rich foods in diets in Asia and Africa



Food safety & livelihoods

Grace et al., Gender roles and food safety in 20 informal livestock and fish value chains, 2015

Milk (cow)

Production: men (x Nairobi)

Processing: women

Marketing: women (x
Abidjan)

Consumed: both

Milk (goat)

Production: men (w milk)

Processing: women

Marketing: women

Consumed: both

Beef/goat

Production: men (w assist)

Processing: men

Marketing: men
(butcher, pub)

Consumed: both

Poultry

Production: women

Processing: women

Marketing: women

Consumed: both

Pigs

Production: women

Processing: men

Marketing: men

Consumed: both

Fish, crabs

Fishing: men

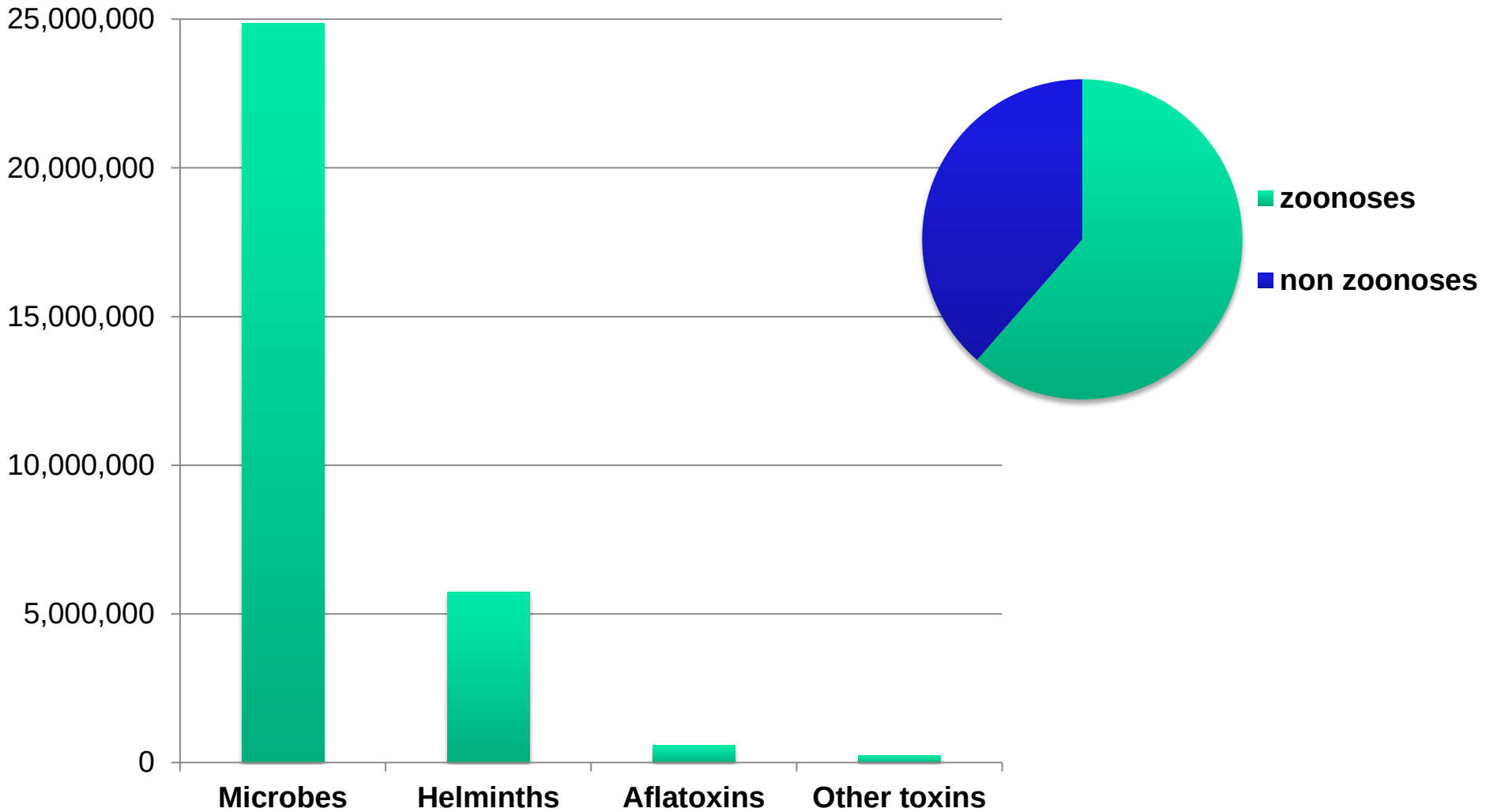
Processing: women

Marketing: women)

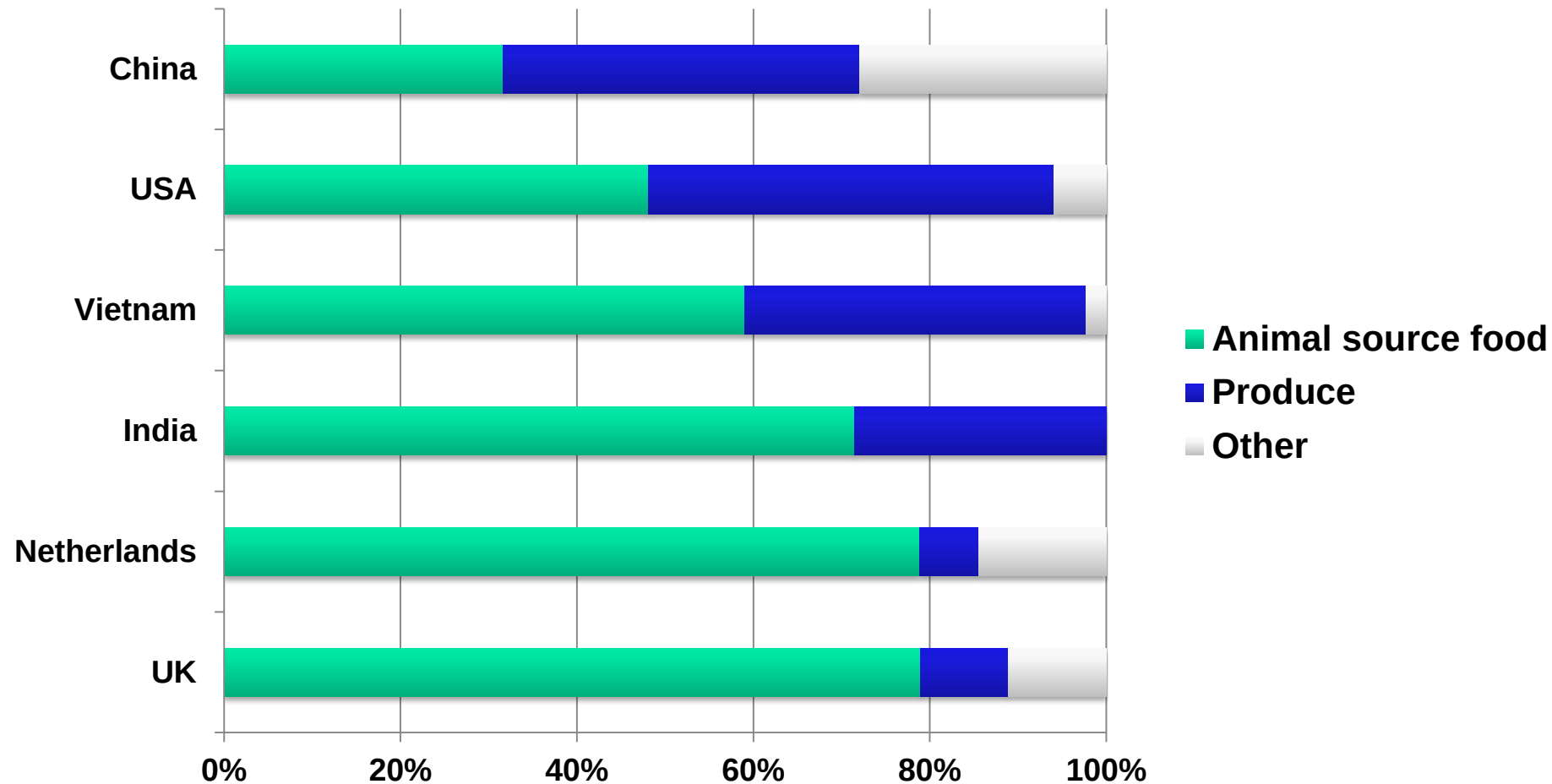
Consumed: both

Causes of FBD

Burden LMIC



Foods implicated in FBD



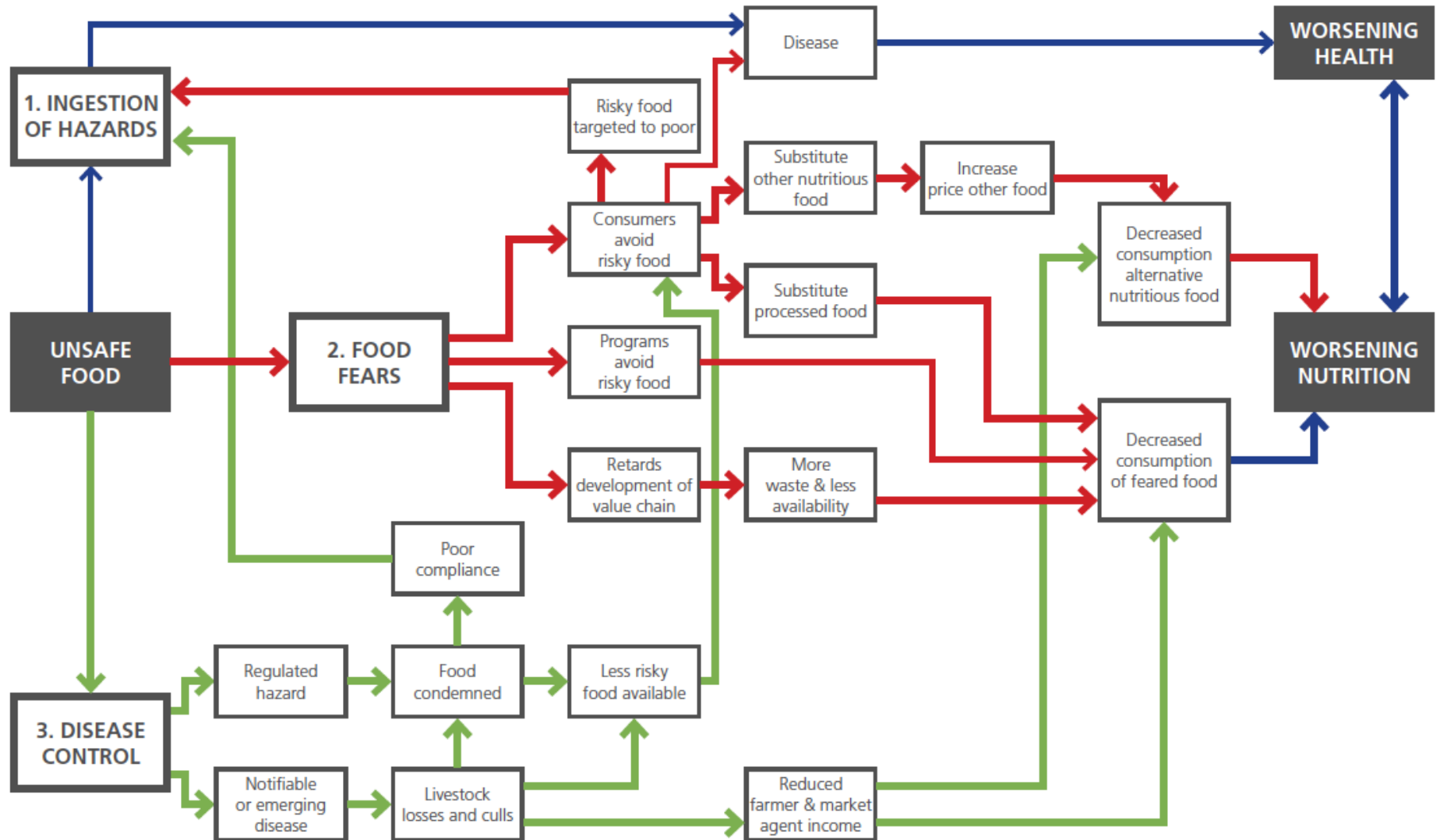
Painter et al., 2013, Sudershan et al., 2014, Mangan et al., 2014; Tam et al., 2014;
Sang et al., 2014 ; ILRI, 2016

Food safety & nutrition

- Diarrhoea a risk factor for stunting – perhaps 10-20%?
- Ingestion of faecal material on food or in the environment may contribute to environmental enteropathy
- Food allergies may affect 1-10% of children: eggs & milk often implicated
- Associations between aflatoxins and stunting
- Regulations aimed to improve food safety may decrease the availability and accessibility of foods
- Food scares decrease consumption



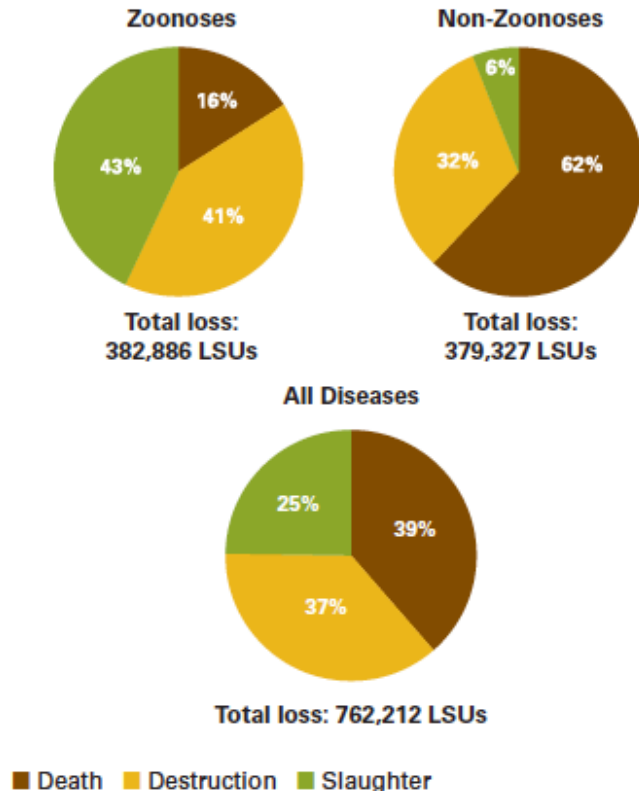
Pathways from unsafe food to poor health



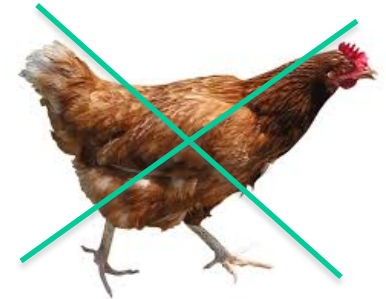
Un-intended consequences

LOSS OF LSU_s BY TYPE OF LOSS

2006-2009



¹ The definitions according to OIE reporting guidelines are:
 Number of deaths: number of animals that died from the disease.
 Number of animals destroyed: number of animals that were culled and destroyed by incineration or burying. This number should not include the number of animals that died from the disease or were slaughtered.
 Number of animals slaughtered: number of animals that were slaughtered with no restrictions on the use of the slaughter products, such as for human consumption.



Decreased dietary diversity,
 reduced poultry
 consumption, substitution of
 nutritious foods with sugary
 foods and increased
 stunting.

Can we regulate our way to food safety?

- **100%** of milk in Assam doesn't meet standards
- **98%** of beef in Ibadan, **52%** pork in Ha Noi, unacceptable bacteria counts
- **92%** of Addis milk and **46%** of Nairobi milk had aflatoxins over EU standards
- **36%** of farmed fish from Kafrelsheikh exceed one or more MPL
- **30%** of chicken from commercial broilers in Pretoria unacceptable for *S. aureus*
- **24%** of boiled milk in Abidjan unacceptable *S. aureus*

Can we modernise our way to food safety?

- Supermarketisation is slower than thought.
- Formal sector food is riskier than thought.
- Modern business models have often run into problems
 - *Co-ops, abattoirs, market upgrades*





Capacity building useful if incentives in place

- Many actors are well intentioned but ill informed
- Small scale pilots show short term improvements
- Smallholders have been successfully integrated into export chains
- But domestic GAP has limited effect
 - In 4 years VietGAP reached 0.06%
 - In Thailand GAP farmers have no better pesticide use than non-GAP
- While training & legitimising vendors
 - T&C Kenya





- Branding & certification of **milk vendors** in Kenya & Guwahti, Assam led to improved milk safety.
- It benefited the national economy by \$33 million per year in Kenya and \$6 million in Assam
- 70% of traders in Assam and 24% in Kenya are currently registered
- 6 millllion consumers in Kenya and 1.5 million in Assam are benefiting from safer milk

Take home messages

- Livestock food can contribute to growth & good outcomes
- FBD is important for health and nutrition
- Most FBD is due to microbes & worms in fresh foods
- Efforts to improve FBD can be more harmful than FBD
- Control & command approaches don't work but solutions based on working with the informal sector more promising

THANK YOU!!



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Further reading

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http://dx.doi.org/10.12774/eod_er.oct2015.graced

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Unnevehr L., Grace D., eds. 2013, Aflatoxins: Finding solutions for improved food safety, International Food policy Research Institute: Washington DC.

World Health Organisation first global report on the burden of FBD.
http://www.who.int/foodsafety/areas_work/foodborne-diseases/ferg/en/

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Patron: Professor Peter C Doherty AC, FAA, FRS

Animal scientist, Nobel Prize Laureate for Physiology or Medicine—1996

Box 30709, Nairobi 00100 Kenya
Phone +254 20 422 3000
Fax +254 20 422 3001
Email ilri-kenya@cgiar.org

ilri.org
better lives through livestock
ILRI is a CGIAR research centre

Box 5689, Addis Ababa, Ethiopia
Phone +251 11 617 2000
Fax +251 11 667 6923
Email ilri-ethiopia@cgiar.org

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