



Food and Agriculture Organization of the United Nations

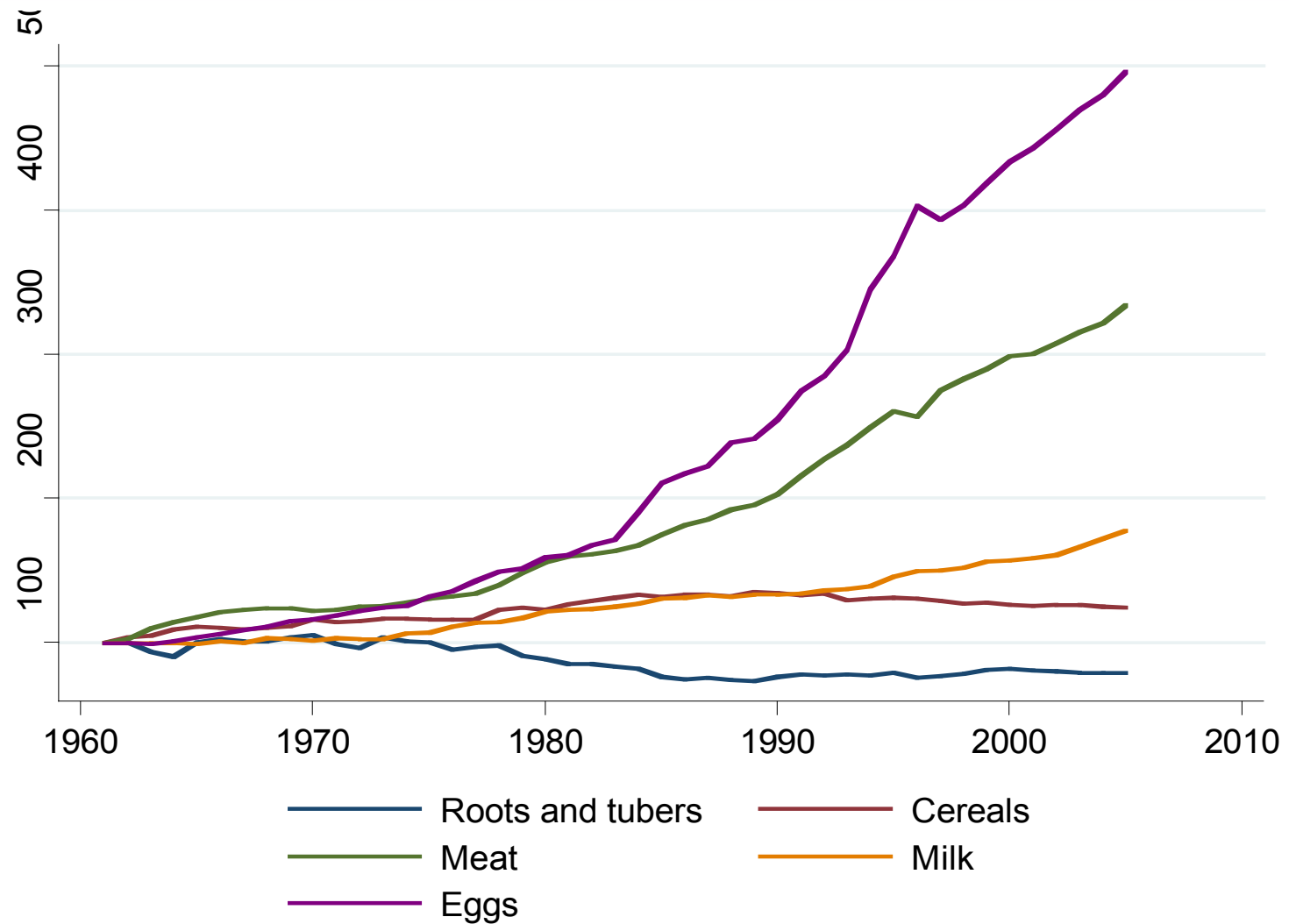


# Feed safety: an overview and the FAO programme for capacity development

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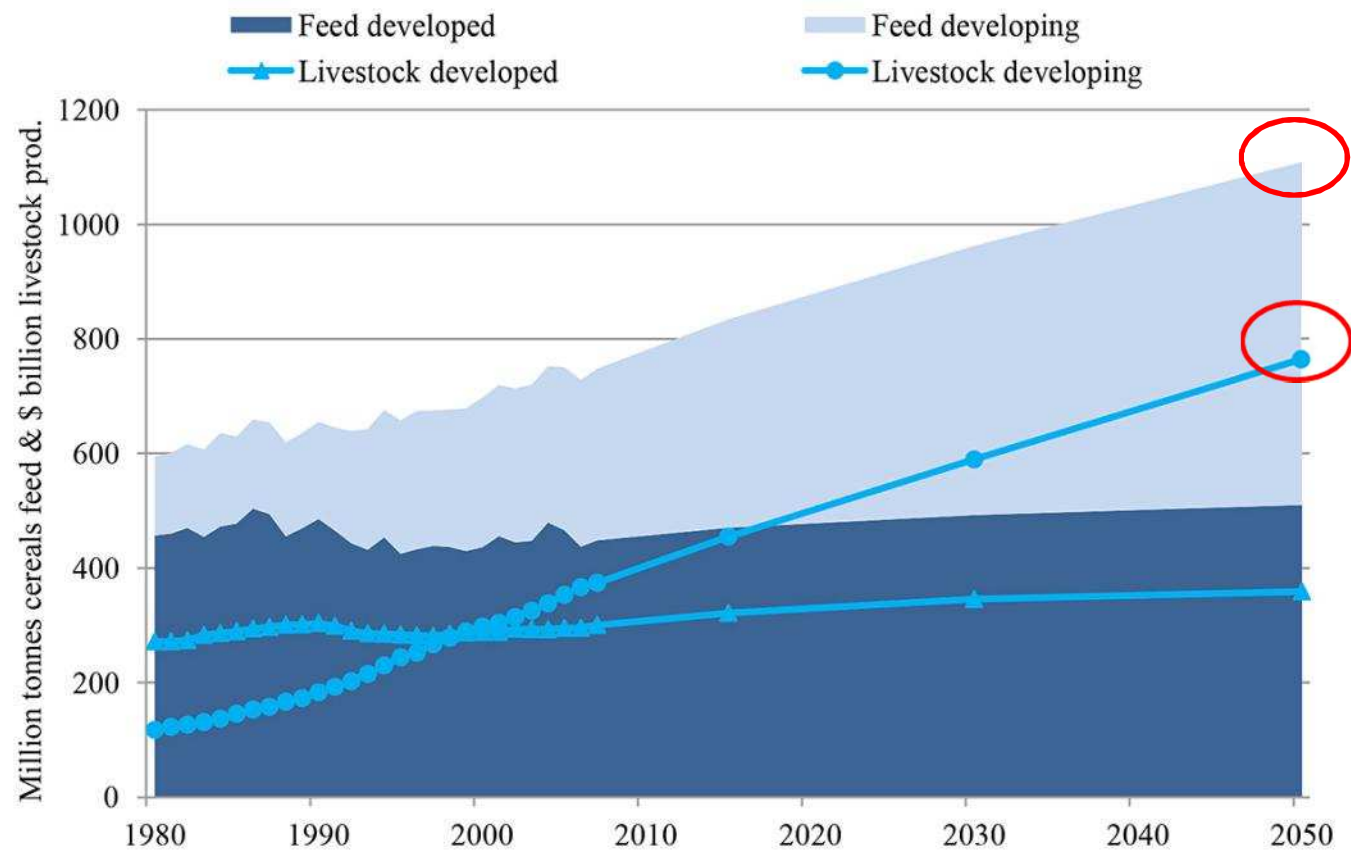


# Consumption of product of animal origin





# Cereals feed and livestock production



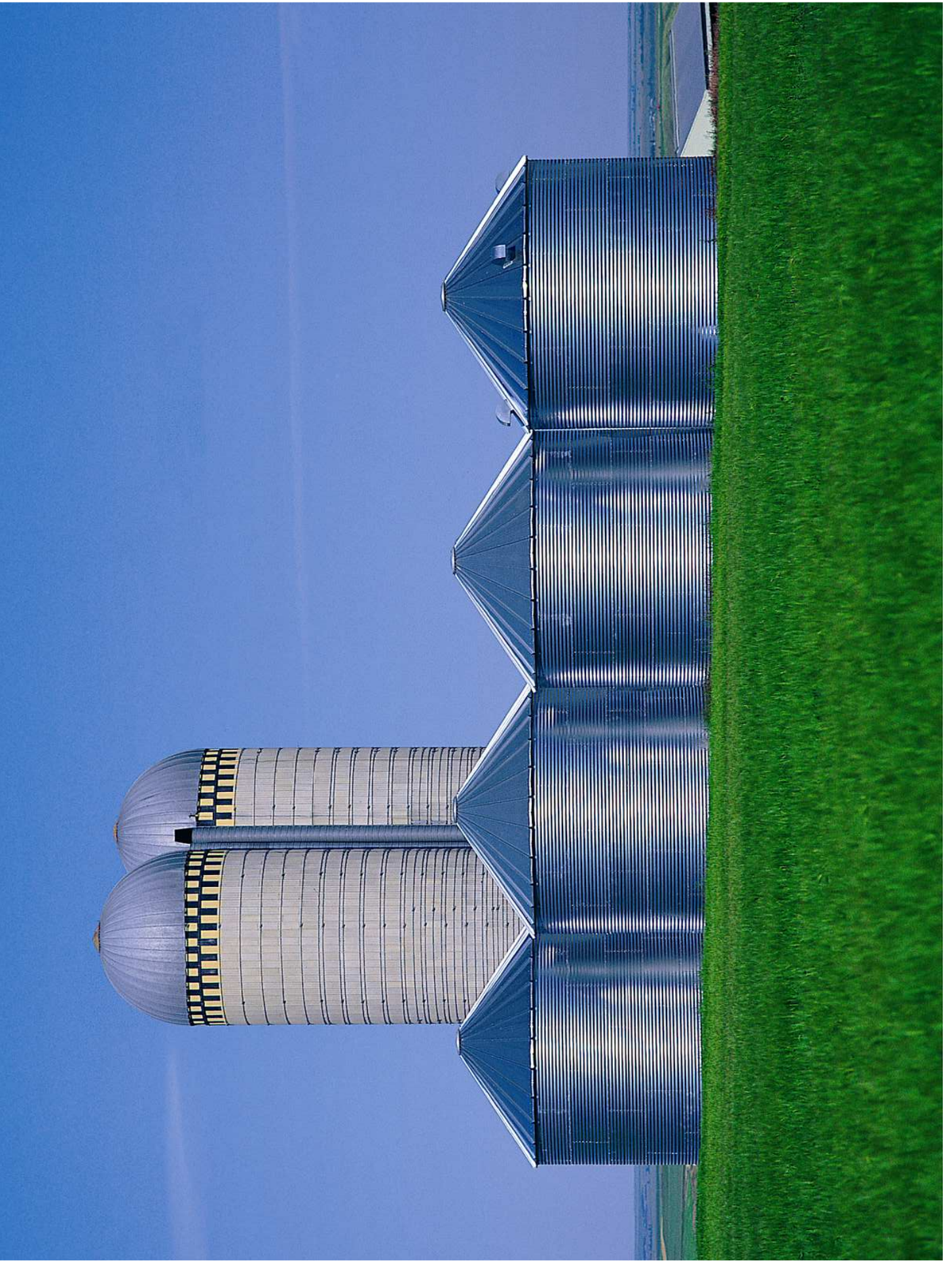
Source FAO, World agriculture towards 2030/2050: the 2012 revision



## Importance of animal feed and feed safety

Animal feed production makes a significant contribution to the global food industry, enabling the production of animal proteins throughout the world. Addressing the safety of feed is of foremost importance if safe food of animal origin has to be produced.







## Feed safety

- a prerequisite for food safety and human health (feed handlers and consumers)
- a necessity for animal health and welfare
- a component of access to trade, income generation and economic sustainability
- a contribution to feed and food security and to the reduction and feed and food losses





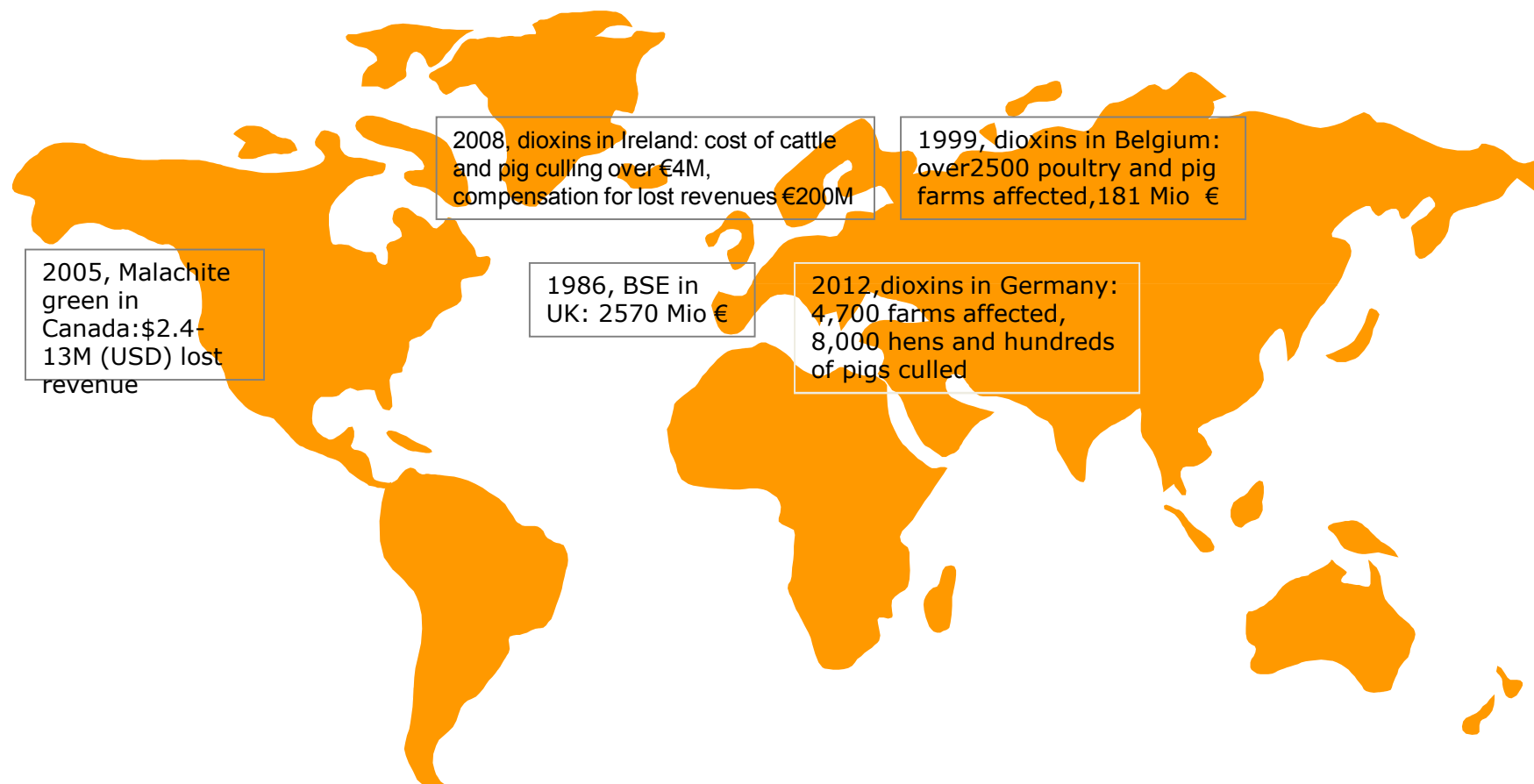
## Animal production hotspots

- Bovine Spongiform Encephalopathy in EU, Japan, Israel, USA, etc.
- Foot and mouth disease in UK, the Netherlands, etc.
- Dairy, eggs and poultry contaminated with dioxins and PCBs in Belgium and EU countries
- Pork and its products with dioxins in Ireland
- Milk and dairy with aflatoxins in Europe
- *E.coli* O157:H7 in USA and Japan
- Listeriosis in USA and France
- Concern about the development of antimicrobial resistance

related to feed



# Economic losses









## Undesirable substances in animal feed

- **Ions and elements:** As, Cd, Pb, Hg, Nitrites
- **Persistent organic pollutants (POP):** dioxins and non-dioxin-like PCBs
- **Polybrominated & perfluorinated** substances
- Natural **plant toxins** and plant metabolites: saponines, glucosinolates, alkaloids, polyphenols, etc.
- **Mycotoxins:** AFB<sub>1</sub>, DON, FB, ZEN, OTA, Ergot, etc.
- **Botanical impurities:** *Datura*, *Castor oil*, *Crotolaria*, *Madhuca*, a.o.
- Miscellaneous: Radionuclides, Melamine, ambrosia, glycerin, etc.



Food and Agriculture Organization of the United Nations



# Developing Capacities, current FAO activities and beyond



## Our activities

- Provision of scientific information
- Advocacy and awareness raising
- Facilitation of multi-stakeholder dialogue
- Development of strong, effective partnerships
- Institutional development
- Dissemination of information
- Support to the implementation of Codex recommendations: upgrading of legislation, manuals, technical support and training





# Animal Feed Impact on Food Safety

FAO/WHO Expert Meeting

FAO Headquarters (Rome), 8 - 12 October 2007



## RESOURCES

## Publications

## Animal Health

Animal Production

Animal Welfare

## Environment

## Feed and Food Safety

Genetic Resources &amp; Reproduction

Livestock and Gender

## Poverty Alleviation

## Sector Analysis and Policy

## Veterinary Public Health














## Feed and Food Safety

Please find below all the documents related to Feed and Food Safety:

Documents in English language are flagged. Titles in blue are linked to other versions (if available).

100

**P** = Publication **M** = Manual **WP** = Working Paper **Co** = Co-ordination

Year	Title	TYPE	PDF
2009	Toxicological and Health Aspects of Amino Acids and Cyclic Acid	P	
2008	La larga sombra del...	P	
	Brucellosis in...	P	
	Animal Impact of Food Safety - Report of the FAO/WHO	P	
	Joint FAO/WHO/OIE Expert Meeting on Critically Important Antimicrobials	P	
2007	Informe pecuario 2006	P	
	Rapport sur l'élevage 2006	P	
	Meat Processing Technology	P	
	Abattoir Development (Asia region)	P	
2007	Les bonnes pratiques d'hygiène dans la préparation et la vente des aliments de rue en Afrique	M	
	Diagnostic Techniques for Transmissible Spongiform Encephalopathies	M	



FAO/WHO Expert Meeting

FAO Headquarters (Rome), 8 - 12 October 2007

7 yrs later





Hazards associated with conventional,  
novel and unconventional feed, feed  
ingredients and feed production processes

FAO/WHO Expert Meeting

FAO Headquarters (Rome), May 2015





# FAO/IFIF Manual of Good Practices for the Feed Industry



Manual of  
Good Practices  
for the Feed Industry





## Joining forces

STORIES FROM A SUCCESSFUL COLLABORATION WITH THE FEED SECTOR





FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS  
*helping to build a world without hunger*

Technical Cooperation Department

# Technical Cooperation Programme

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The Technical Cooperation Programme (TCP) was launched in 1976 and is a part of FAO's Regular Programme, financed from the assessed contributions of its Members.

The Programme aims to provide FAO's technical expertise to its Member countries through targeted, short term, catalytic projects. These projects address technical problems in the field of agriculture, fisheries, forestry and rural livelihood that prevent Member countries, either individually or collectively, from implementing their development programmes. The TCP may be used in all areas of action that pertain to FAO's mandate and competence and which are covered by the Organization's Strategic Framework.

TCP projects should produce tangible and immediate results in a cost-effective manner. They support improved food security and poverty alleviation, and should catalyse long-term development changes.

The TCP is one of FAO's tools for contributing to the achievement of the **UN Millennium Development Goals** and particularly the goal of eradicating extreme poverty and hunger.

Since its creation in 1976, the TCP has funded projects worth more than US\$ 1.3 billion as at 31 December 2009.

Up to December 2009, the TCP was managed by the FAO's Technical Cooperation (TC) Department and coordinated by the TCP Service (TCOT). In January 2010, a large share of the responsibility for TCP management was transferred from the FAO's headquarters to the FAO's decentralized offices. Thus, the responsibilities for the tasks of the decentralized TCP process are shared among the Technical Cooperation (TC) Department, FAO's Regional, Subregional and

Country Offices. (for more information see the [FAO section of this Web](#)

## Key publications

**TCP Manual - Managing the Decentralized TCP (December 2009)**

**(English)** (1.2 Mb)

**(Russian)** (1 Mb)

For the biennium 2010-2011, the total budget available to the TCP for the implementation of projects is US\$ 106.6 million.



A woman works a treadle pump to irrigate crops. The Technical Cooperation Programme gives support to



## Making agricultural investments more effective for rural people

Effective agriculture and rural development investments are those that result in sustained food security and reduced poverty. This is our mission.

The FAO Investment Centre works in partnership with countries and both public and private financial institutions to increase the efficacy and flow of external, domestic and private investments to agriculture and rural development. Our role is to bring FAO's knowledge to bear on each step of the investment process. We help developing and in-transition countries invest with the long-term picture in mind, create synergies between investment programmes, define and strengthen national capacities and design specific investment programmes and projects intended to bring the greatest environmental, social and economic benefits to the lives of rural people. We assist countries in promoting their agricultural sector not only for purposes of economic development, but also to meet the health and nutrition needs of their citizens.

Our work is country-focused. It involves collaboration in the field with national counterparts in government ministries, financing institutions, the private sector, the donor community and other UN entities, as well as with the intended beneficiaries of agricultural and rural development investment, especially small-scale farmers, who together constitute the world's biggest investors in agriculture.

### Upstream

Upstream work serves the development of national agriculture and rural development investment strategies. It informs the criteria and rationale used to select agricultural parameters and priorities of national investment in agriculture and rural development. It provides the basis for agricultural and rural development investment and identifying where investment can provide the greatest benefit.

**Upstream work includes:**

Work is downstream when it pertains to a specific investment programme or project. The Investment Centre's purpose is to design programmes and projects that are: in accord with national investment priorities for agriculture and rural development; technically sound and the best of alternatives; attractive to intended beneficiaries; operationally and managerially workable; economically and financially viable; sustainable and environmentally sound.

**Downstream work includes:**

### Capacity Development



The Investment Centre seeks to strengthen the capacities of public and private sector organisations to plan, implement and enhance the sustainability of their own agriculture and rural development investment operations.

We do this especially by working with local counterparts to transfer skills through on-the-job training. Best practices are promoted, building on lessons





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# **Multi-stakeholder Partnership Programme for Capacity Development for Feed Safety**



## Objective and expected outcome

To develop the capacities of the relevant stakeholders to ensure the production and supply of safe feed.

Improved safety of feed, and thus enhanced food safety and public health, animal health and welfare and food security.



# Stakeholders

Government services, livestock and feed producers, food producers and retailers, non-governmental organizations, academia and research centres, financial institutions, actors active along the feed/food value chain.

The programme will also promote partnerships and exchange among all relevant stakeholders of data and information, technical expertise and research results.



# Activities

- Stocktake of relevant projects/activities
- Develop risk assessment tools
- Prepare a manual on risk assessment procedure and on hazards prioritization
- Train on good manufacturing practice
- Prepare a manual on HACCP application to feed production
- Develop database of feed hazards
- Gather information on emerging toxins, analytical methods, new identification methods





## Interested?

- Join us for the 8<sup>th</sup> International Feed Regulators Meeting, Atlanta, USA, January 2015
- Respond to the Expert Meeting call for experts and data, January 2015
- Contact us if interested in participating in the Multi-stakeholder Programme for Capacity Development
- Attend 5<sup>th</sup> Global Feed and Food Congress, Antalya, Turkey 2016



## More information

- FAO web site on Animal Production and Health: [www.fao.org/ag/aga.html](http://www.fao.org/ag/aga.html)
- subscribe to the FAO mailing list on Animal Nutrition and Feeding
- contact: [daniela.battaglia@fao.org](mailto:daniela.battaglia@fao.org)



**Thank you**

