



Food and Agriculture
Organization of the
United Nations

FAO support to assess the use of antimicrobials in feed and decrease the use in animal production through animal nutrition and feed strategies and options



FAO Action Plan on Antimicrobial Resistance

- Improve awareness on AMR and related threats
- Develop capacity for surveillance and monitoring of AMR and AMU (antimicrobial use) in food and agriculture
- Strengthen governance related to AMU and AMR in food and agriculture
- Promote good practices in food and agricultural systems and the prudent use of antimicrobials



FAO Survey on the use of medicated feed and antibiotics used for growth promotion, and on the legislation regulating them

- to prepare guidance material on the role of feed legislation to reduce the overuse and misuse of antimicrobials in animal production and on how to regulate medicated feed production and use.
- to gain a better understanding of:
 - the production, distribution and use patterns of medicated feed and antibiotics used for growth promotion;
 - and the legal frameworks regulating and controlling the production, distribution and use of medicated feed.



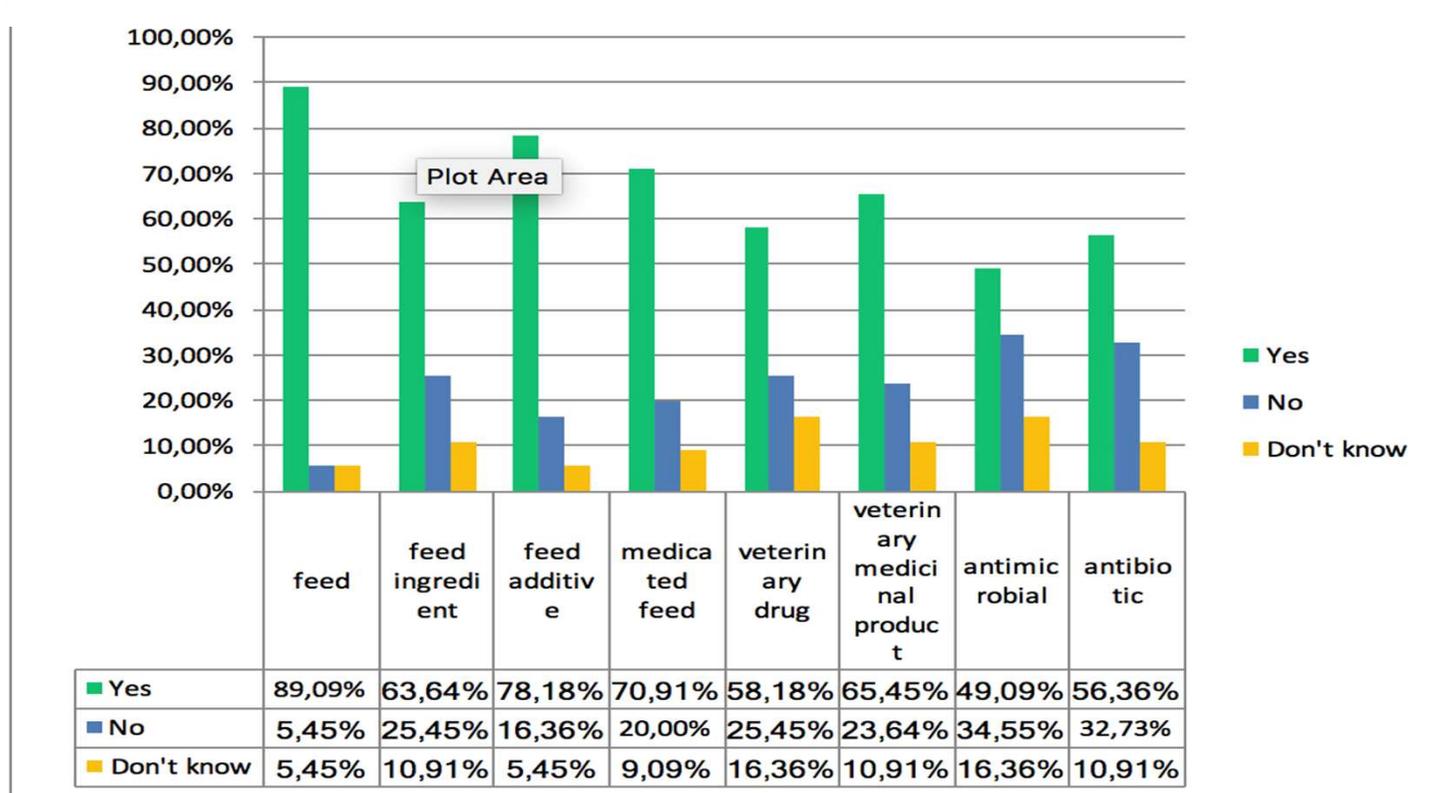
Questions on:

- Production, marketing and use of medicated feed
- national legislation definitions for antimicrobials, antibiotics, veterinary drug, medicated feed, feed additive, etc.;
- national legal framework and requirement addressing production, distribution, sale and use of medicated feed;
- regulation addressing feed additives/ingredients that have antimicrobial effects;
- whether feed or feed additive or ingredient are allowed to be labelled or marketed with general health claims or for growth promotion purposes;
- whether there in preparation any new regulation addressing these matters.



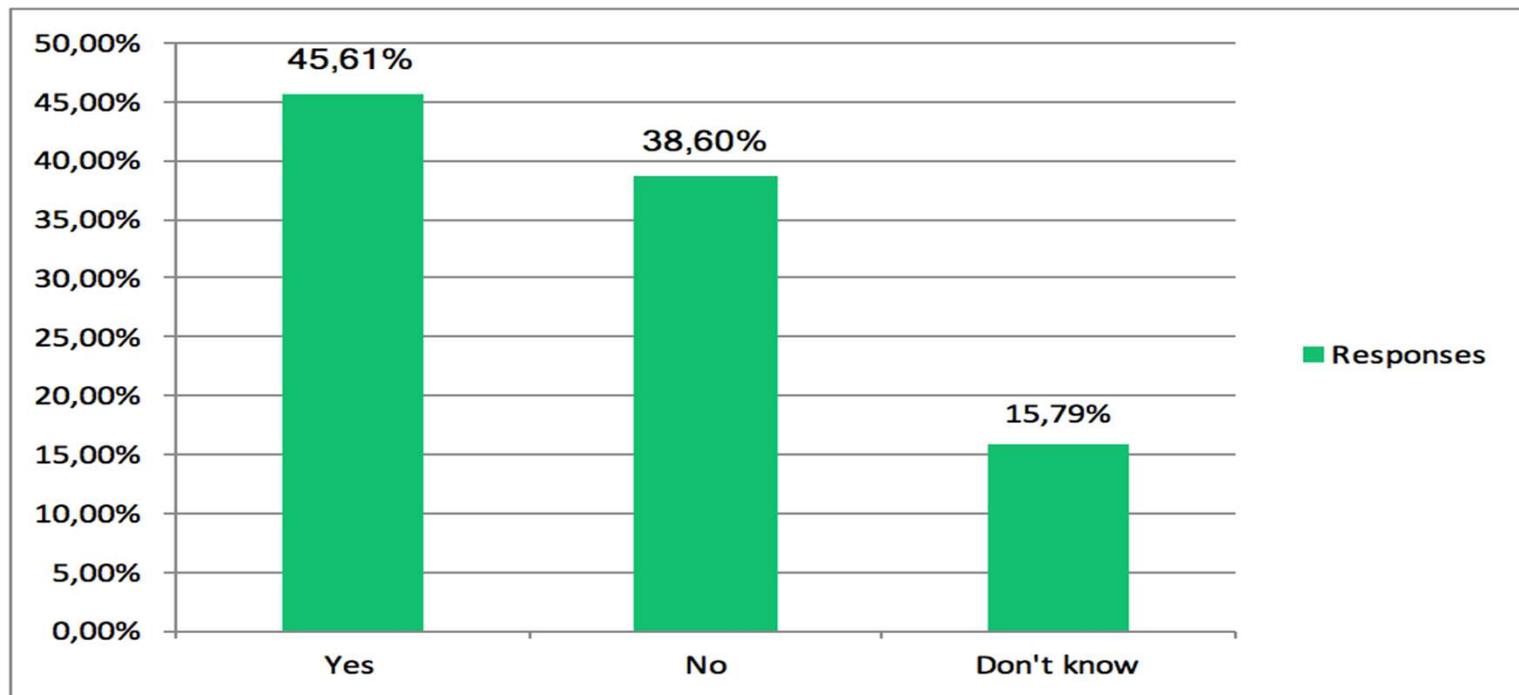
definitions

Does your national legislation include a definition for:



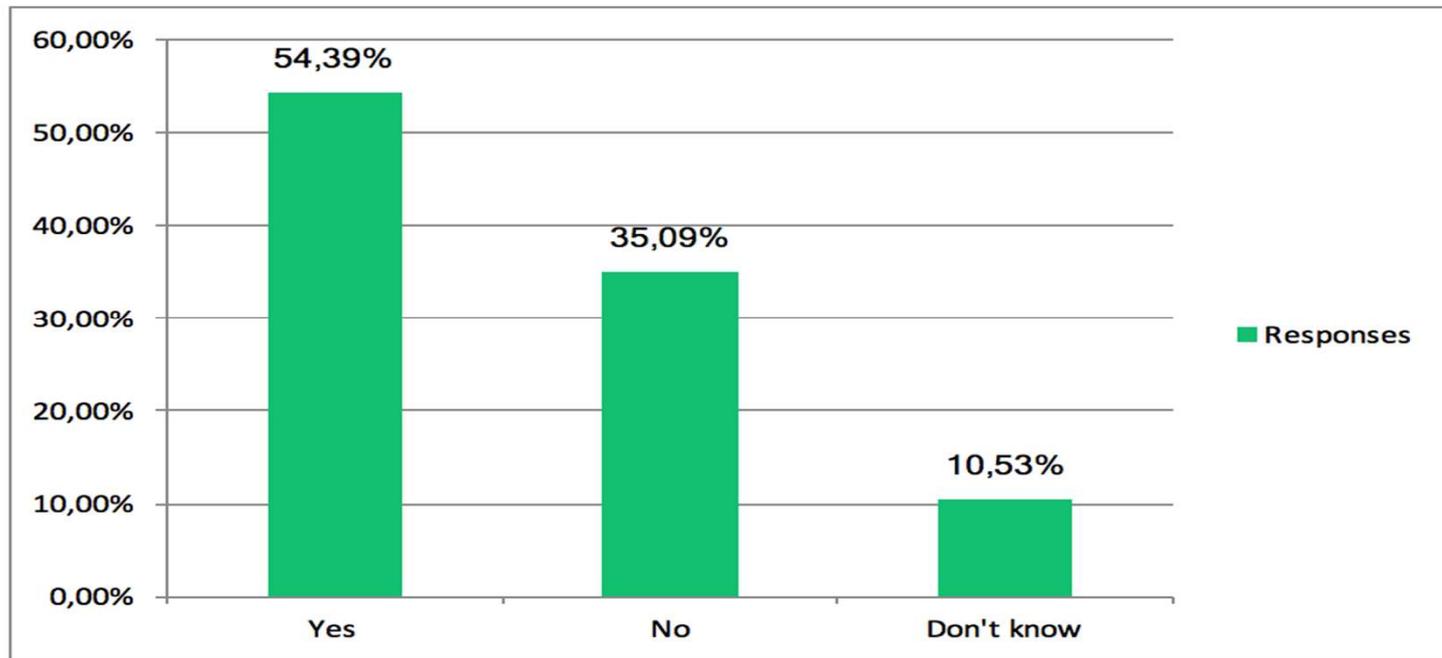
survey results - growth promoting feed additives regulations

Is there any regulation addressing feed additives/ingredients that have antimicrobial effects?



survey results - health claims for feed additives

Is a feed or feed additive or ingredient allowed to be labelled or marketed with general health claims or for growth promotion purposes?



AMR in feed legislation

FAO is developing a methodology to analyse national AMR-related legislation across areas with an impact on AMR, including feed legislation

Elements of feed legislation that may have an impact on AMR	Challenges associated
Medicated feed	What is considered as a medicated feed? Are coccidiostats, anthelmintic and other antiparasitic considered as VMP?
Feed additives	Which feed additives may have proven antimicrobial properties? Do they contribute to AMR? Are they safe? Should there be a risk assessment that takes AMR into consideration before they are approved?
Feed labelling	What can be claimed as having health properties? Should feed additives claim to have positive health effects? (and to help preventing the use of AM?)

concerns

- Counterfeit and low quality antimicrobials
- Their over-the-counter availability, accessible cost and mixing with on-farm produced feed



FAO has recommended to use medically important antimicrobials in food-producing animals only to treat diseases. Only under strict circumstances they should be used to prevent an imminent threat of infection. FAO recommends also to phase out the use of antimicrobials for growth promotion.



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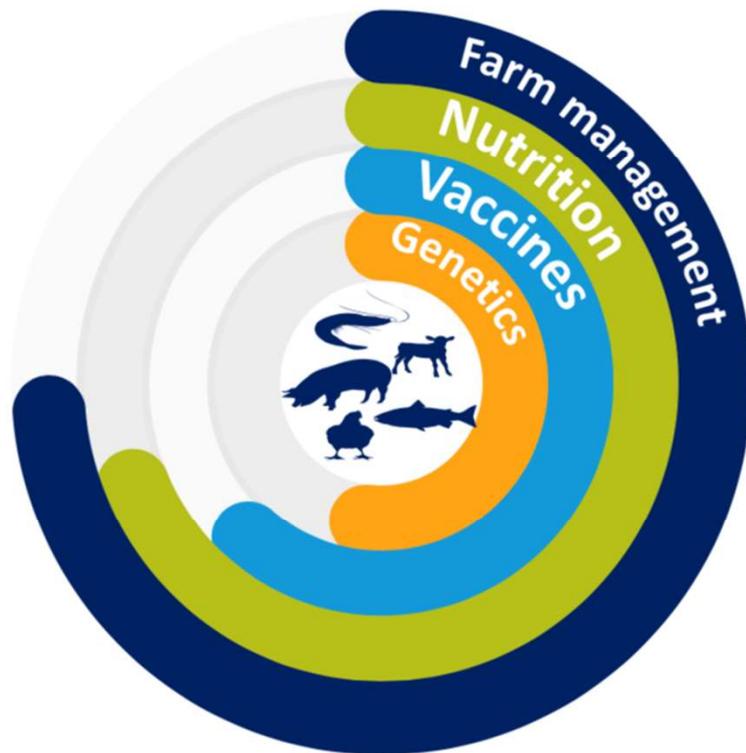
When this happens, farmers have to implement measures that allow reducing the use of antibiotics while maintaining productivity.

There is a wide range of practices in animal husbandry, hygiene and nutrition, biosecurity, animal health care and welfare that producers can adopt at that scope.



The measures focus on reducing infection pressure in the environment and on optimizing disease resistance and resilience of the animals. Health promoting diets, contribute to disease resistance.





- Optimal farm management
- Healthy nutrition and functional feed additives
- Optimal health management

Source: den Hartog, L. 2017



Nutritional solutions in feed and health management

Feed Management

- Preservation additives
- Mineral formulation
- Raw material quality control by NIR & Mycotoxin Risk Management
- Protein digestibility analysis by measuring reactive lysine

In order to reach:

Animal production efficiency

- Optimal performance
- Improved litter quality
- Nutritional efficiency

Health Management

- Functional additives for gut health
- Nutritional solutions for LifeStart and transition periods

Secure animal production

- Healthy start
- Overcome dysbiosis
- Strong gut health & immune function



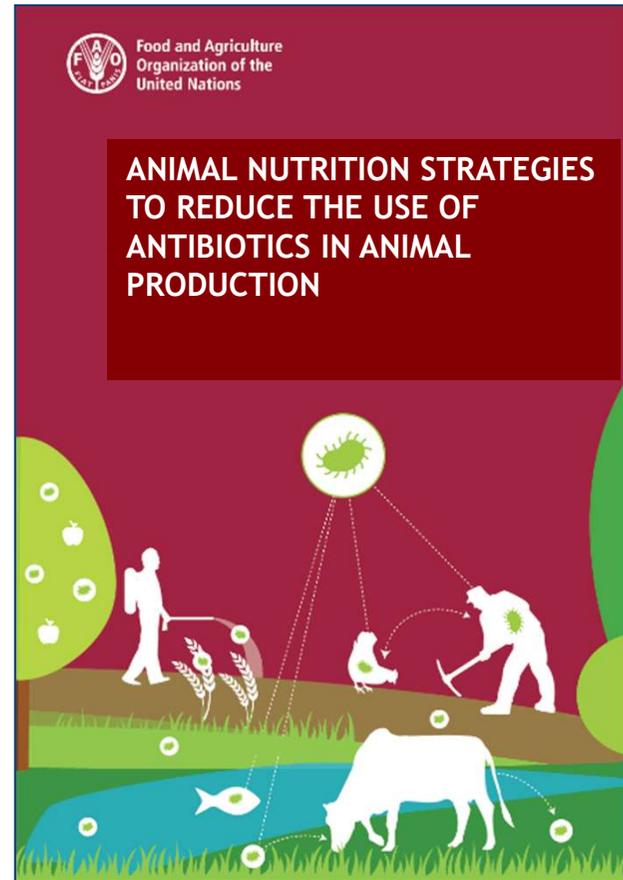
Sorce: den Hartog, L. 2017

options to minimize antimicrobial use

- ensure feed safety: contain microbiological contamination of feed and water
- provide adequate nutrition to keep animals healthy and resistant to diseases
- ensure gut health: stabilize intestinal microbiota and strengthen the mucosal barrier
- use feed ingredients or additives that enhance the efficiency of feed conversion (e.g. short- and medium-chain fatty acids, enzymes, probiotics, prebiotics, symbiotics, acidifiers, plant extracts, phytochemicals, essential oils, yeast, certain vitamins and trace elements and others)
- avoid ingredients with antinutritional properties (e.g. lectins, and protease inhibitors)
- apply specific processing and presentation of feed that make its conversion to animal products more efficient and increase growth rates and production yields
- All the above, together with good farm management, animal husbandry, hygiene, health and welfare, vaccination schemes, biosecurity, genetic for resistance, etc.



upcoming



Objective and scope

provide guidelines for dietary strategies that can contribute to a healthy gastrointestinal and reduce the risk of enteric health and respiratory problems in swine, poultry and ruminants in critical transition periods where antibiotic use is relatively high, and support the defence system of the host during critical transitions to avoid unnecessary use of antimicrobials.



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- General principles of gastrointestinal digestion and defence
- Dietary toolbox to support gastrointestinal defence
- Application of dietary measures in swine, poultry and ruminants;
- Health claims of dietary interventions
- Dietary best practices in antibiotic use reduction programmes



Dietary toolbox to support gastrointestinal defence

- Water allowance and quality
- Feed quality (e.g. available nutrients, physical characteristic, etc.) and safety;
- Feeding levels
- Feed form and particle size
- Nutrients in feed (proteins, fiber, vitamins, microelements, etc.)
- **Feed additives:** short- and medium chain fatty acids, organic and inorganic acids; butyrate; plant extracts, phytochemicals; probiotics or direct fed microbials; prebiotics; beta-glucans; enzymes; and others.





Food and Agriculture Organization
of the United Nations

Feed Safety Multi-stakeholder Partnership



Series of seminars/webinars on medicated feed and feed/AMR-related topics



Food and Agriculture Organization
of the United Nations Feed Safety Newsletter

Seminar/Webinar invitation



**Feed Safety Multi-stakeholder Partnership
SEMINAR/WEBINAR SERIES:**

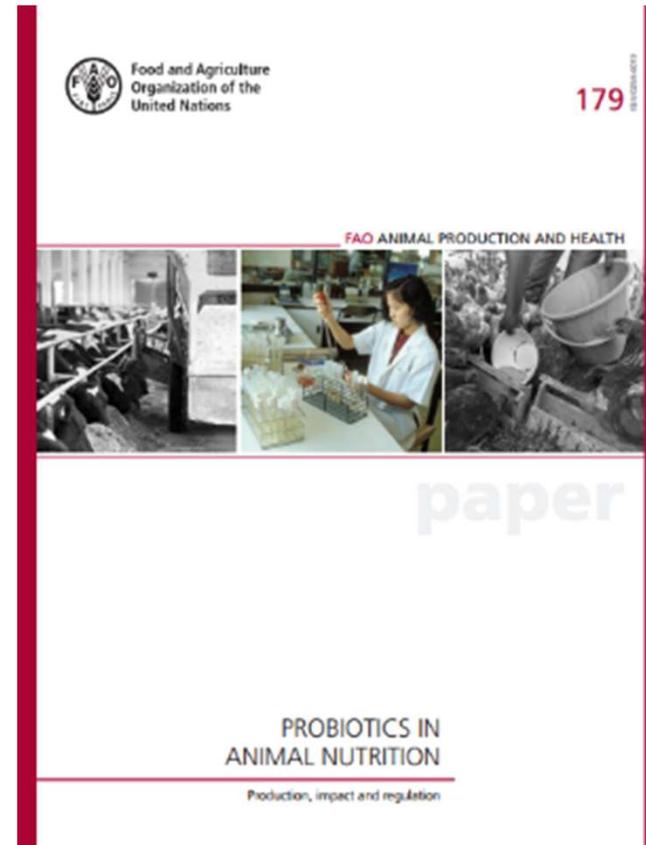
**Medicated feed - an overview of regulations in the major
animal source food markets of the world**

The [Feed Safety Multi-stakeholder Partnership](#) in collaboration with the
FAO Livestock Technical Network is pleased to invite you to a
seminar/webinar on:

**Monday 5 November 2018 from 13:30 – 15:00 (GMT +2)
FAO Headquarter, Philippines Room (C277/281)**

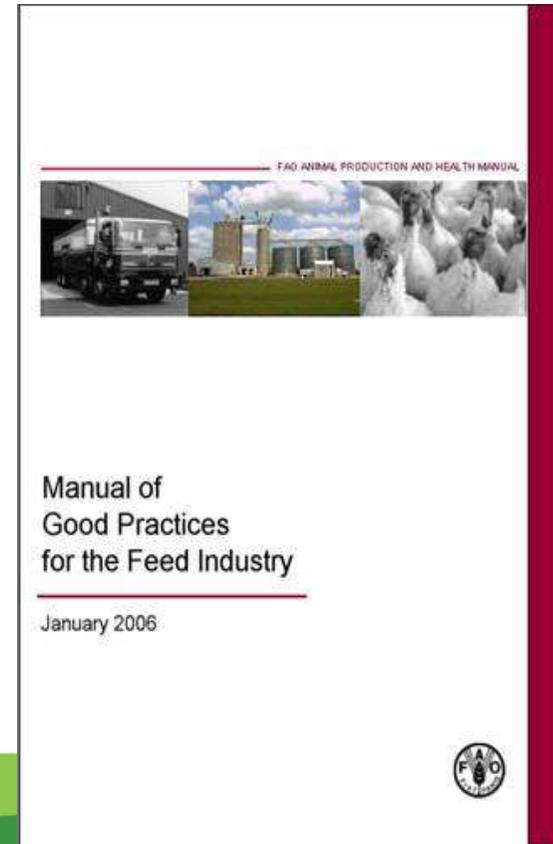


upcoming: update of
FAO publication on
probiotics in animal
nutrition



Update of the FAO/IFIF Manual of Good Practice for the Feed Industry

with special attention to
on-farm production



JOIN US!



International Feed Regulator Meeting - 12th edition - 14 March 2019, Bangkok, Thailand





Welcome to the 6th Global Feed and Food Congress

The 6th Global Feed & Food Congress (GFFC) will bring together leaders from the global feed and food chain in Bangkok, Thailand, on 11-13 March 2019 under the theme 'The future of Feed & Food – are we ready?'

The 6th GFFC will include sessions on the *Digital Revolution in Agriculture, Sustainability, Feed & Food Safety, Nutritional Innovation, Global Regulations & Policy, and Markets & Trade.*





Global Feed Safety Platform



[Background](#)

[Databases](#)

[Resources](#)

[Forum](#)

[News and Events](#)

[Login](#)



International Feed Regulators Meeting. Getting together for better feed and better food.

What is the Feed Safety Platform?

The Global Feed Safety Platform is a knowledge exchange mechanism to produce, collect and make available a wide range of information and knowledge on feed safety from numerous sources across the world. It brings together all relevant stakeholders along the feed and food chain from the public and private sector, the civil society, academia and research centres. All users of the website can contribute to its content by submitting links to publications, legislation, news and much more. Through the databases you can find and contact expert and professionals, as well as organizations and institutions working on feed safety. The

Events

29/10/2017-03/11/2017 United Kingdom

[IDF World Dairy Summit 2017](#)

05/10/2017-06/10/2017 Italy

[IFIF FAO Annual Meeting](#)



- GLOBAL PLATFORM (to share knowledge and best practices)
- DATABASE of experts/professionals
- DIRECTORY of institutions, associations, research and academic centres
- FORUM with moderated discussions
- HelpLine
- DATABASE of capacity development projects and resources





Feed Network

The Global Feed Safety Platform gives access to an email based discussion forum - the **Feed Network**. Its objective is to foster dialogue and collaboration among all operators and professionals working in the feed sector (including private sector, civil society, academia, etc.).

The Feed Network is a communication channel to:

- engage in thematic discussions and exchange knowledge, experience and information;
- post questions on specific issues related to animal feeding and the feed sector and respond to questions as appropriate
- liaise with other members of intergovernmental organizations, governmental authorities, academia, the private sector and civil society, as well as farmers, livestock keepers and feed producers.

Join the forum!

The forum uses Dgroups which is designed for email based discussions. To subscribe, visit the **Feed Network** or contact us feed-safety@fao.org

By writing an email to feed-net@dgroups.org all members will receive your message via email. All messages can be viewed at any time on the community webpage: <https://dgroups.org/fao/feed-net>

Visit the forum's website and search for your profile to add or change personal information. You can modify your profile settings and change the email delivery preferences to receive a daily or weekly summary of all messages sent. If you need to set up a (new) password, click [here](#).

Messages can be sent in any language, preferably in English, French or Spanish. Unfortunately, the group does not provide any translations.

This Network is moderated by the Secretariat of the Feed Safety Multi-Stakeholder Partnership, based at the Animal Production and Health Division of the Food and Agriculture Organization of the United Nations (FAO).

Join the forum!

1. Subscribe [here](#)
2. Send a message by writing an email to feed-net@dgroups.org

Contact

feed-safety@fao.org



The objective of the FAO Livestock Technical Network is to foster dialogue, knowledge exchange and collaboration among all operators and professionals interested in the livestock sector and related topics (including governmental institutions, producers and the private sector, civil society, academia, etc.).

This web-based platform, open to all stakeholders, intends to keep the network members informed, knowledgeable and inspired to contribute better to the sector sustainable and responsible development. It serves as repository of all information shared through the network newsletter and mailing list.

This space offers an environment where members can engage through:

- launching and contributing thematic discussions;
- exchanging experiences, information, knowledge and ideas;
- sharing, discussing and documenting concepts, technologies, and practices;
- creating and animating regional, sub-regional or national sub-communities;
- seeking the advice and opinions of experts and peers;
- providing peer support;
- posting or responding to questions; and
- developing group work and partnerships.

The network is coordinated by Daniela Battaglia and Tonia Galasso, Food and Agriculture Organization of the United Nations (FAO).

Let us know about your background and interests or what knowledge you can share with us. For any query or to provide inputs, contact us at fao-livestock-network@fao.org



Antimicrobial Resistance

- Background
- Key issues
- Projects
- News and Events
- Get Involved
- Resources



About AMR



What is it?



FAO's role



Who we are



Key sectors

Antimicrobial drugs play a critical role in the treatment of diseases, their use is essential to protect both human and animal health. However, antimicrobials are often misused for treatment and prevention of diseases in livestock sector, aquaculture as well as crop production. These actions are often associated with the potential risk of emergence and spread of antimicrobial resistant micro-organisms.

Key facts

<p>Around 700.000 human deaths each year related to antimicrobial resistance (UK's O'Neill Commission)</p>	<p>27 different antimicrobial classes used in animals.</p>	<p>Total global animal health market in 2011 was equivalent to USD 22 billion (OECD)</p>	<p>Just 89 countries report having a system in place to collect data on the use of antimicrobial agents in animals (OIE, 2015)</p>	<p>No standardized data available on the global use of antimicrobials in livestock</p>
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Announcements

Join our webinar 5 November at 13:30 CET to learn about medicated animal feed - an overview of regulations in the major animal source food markets of the world. Hosted by the Feed Safety Multi-stakeholder Partnership in collaboration with the FAO Livestock Technical Network.

Subscribe to the new FAO AMR mailing list! Simply email Daniela.Battaglia@fao.org with subject line: **SUBSCRIBE TO FAO AMR MAILING LIST**

You will receive a confirmation email that you have been added to our community, and by joining you will get access to important updates

Publications

Monitoring global progress on addressing antimicrobial resistance: analysis report of the second round of results of AMR country self-

News

Asia-Pacific region moves forward with plans to mitigate the risks of AMR in defence of its crucial aquaculture industry and to protect

more information

- visit the Global Feed Safety Platform:
www.fao.org/feed-safety/en/
- or the FAO AMR website:
www.fao.org/antimicrobial-resistance/en/
- join the Feed Network: <https://dgroups.org/fao/feed-net>
- or the FAO Livestock Technical Network
- subscribe to the FAO antimicrobial resistance or animal nutrition and feeding mailing lists
- daniela.battaglia@fao.org





**RESPONSIBLE USE
OF ANTIMICROBIALS IN AGRICULTURE
SAVES LIVES**