

**Side Event: Animal nutrition and feed strategies and options to decrease
the use of antimicrobials in animal production**

10 December 2018, lunch time (1.5 hours)

Busan, Republic of Korea

Background

The inappropriate and excessive use of antimicrobials in human and animal health, as well as in animal production is considered as a major driver for the development of antimicrobial resistance (AMR). Antimicrobials are applied in animal production for disease prevention and treatment and as growth promoters. Often feed is the route for administering these veterinary medical products. It has been estimated that the total antibiotic usage in animal production of 228 countries was 63 151 tonnes in 2010. However, antimicrobial consumption is expected to rise by 67 percent by 2030, and to nearly double in Brazil, Russia, South Africa, India and China, if no additional restrictions on their use are taken.

Reducing the inappropriate use of antimicrobials is on the agenda worldwide. 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. However, when this happens, farmers have to implement additional measures that allow reducing the use of antimicrobials while maintaining productivity. The good news is that there is a wide range of practices in animal husbandry, hygiene and nutrition; biosecurity; animal health care and welfare; and use of adapted genetic resources, that producers can adopt at that scope.

In general, the measures focus on reducing infection pressure in the environment and on optimizing disease resistance and resilience of the animals. Minimizing stress, either social or environmental, well-targeted tailor-made vaccination schemes and finally, yet importantly, health promoting diets, contribute to disease resistance. Animal nutrition strategies and options not only comprise the provision of proper amount of nutrients needed for various body functions, such as reproduction and growth, and production, but also help to sustain animal health and welfare. Nutrition influences functions critical for host defense and disease resistance, while feed safety will decrease the chances of feed-borne pathogens affecting the animals.

There is a wide range of animal nutrition measures and options for minimizing antimicrobial use and FAO works to promote their implementation with a variety of stakeholders in the feed sector. Some examples: ensuring feed safety and provide adequate nutrition to keep animals healthy and resistant to diseases; ensuring gut health by stabilizing the intestinal microbiota and strengthening the mucosal barrier; using feed ingredients or additives that enhance the efficiency of feed conversion (e.g. in-feed enzymes, competitive exclusion products, probiotics, prebiotics, symbiotic, acidifiers, plant extracts, nutraceuticals, essential oils, yeast and many others); avoiding of ingredients with antinutritional properties (such as lectins, and protease inhibitors); and adopting specific processing and presentation of feed that make its conversion to animal products more efficient and increase growth rates and production yields.

In conclusion, a multifactorial and multi-stakeholder approach can lead to a significant reduction in antimicrobial usage, whilst maintaining high productivity and animal well-being. It is encouraging to note that restricting the use of antimicrobials in food-producing animals has been positively associated, in several countries, with a reduction in prevalence of (multi)-resistant bacterial pathogens.

Objective

The objective of this side event is to inform Codex Alimentarius members on the use of antimicrobials in animal production and how this may contribute to AMR; and on the role of animal nutrition in reducing the need of antimicrobials in animal production and how this could contribute to contain AMR, for them to take informed decisions. More specifically, the event will provide insight on dietary measures that can contribute to a healthy gastrointestinal tract in swine, poultry and ruminants that will support the defense system of the host, reduce the risk of health problems especially in periods where antimicrobial use is relatively high. The event will also highlight the tools available in feed management and diet formulation.

Programme

1. Use of antimicrobials in animal production and feeding - Animal nutrition and feed strategies and options to decrease the use of antimicrobials in animal production: a scientific update and overview. Prof. Johanna Fink-Gremmels, Utrecht University (tbc)
2. FAO support to assess the use of antimicrobials in feed and decrease the use of antimicrobials in animal production through animal nutrition and feed strategies and options - Daniela Battaglia, FAO
3. Feed industry efforts to decrease the use of antimicrobials in animal production – Philippe Becquet, International Feed Industry Association (IFIF)
4. Facilitate Q&A session and discussion with the audience.