Food and Agriculture Organization of the United Nations

World Health Organization

Carryover in Feed and Transfer from Feed to Food of Unavoidable and Unintended Residues of Approved Veterinary Drugs

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Joint FAO/WHO Expert Meeting
8–10 January 2019
FAO Headquarters, Rome, Italy

FAO ANIMAL PRODUCTION AND HEALTH / **REPORT 13**

Objectives

Overall: securing food safety and protecting trade practices in the food and feed sectors

Specific:

- review the causes of veterinary drug carryover in animal feed;
- review the known risks of veterinary drug transfer from feed to food and the impacts on human health and international trade;
- provide guidance for further action required at the international level to address these issues.

Scope

Carryover of residues of veterinary drugs residues during manufacture, storage and transport of feed (including the manufacture of medicated feed pre-mixes).

Residues of veterinary drugs in feed ingredients, including fermentation by-products and processed animal by-products (PAP) (e.g. feather meal).

Background

The Codex Committee on Residues of Veterinary Drugs in Foods (CCRVDF) requested FAO and WHO to provide scientific advice and risk management options to mitigate the unintended and unavoidable presence of residues of approved veterinary drugs in food of animal origin resulting from carryover of veterinary drugs in feed. Such residues when present in feed could be transferred to food of animal origin and might pose risk to public health and/or lead to possible trade disruption.

- Will the presence of residue of a veterinary drug in food at levels associated with unavoidable and unintended carryover in feed constitute a risk to human health?
- Which risk management recommendations (e.g. limit, standards, etc.) could be established to address the trade issue while protecting human health?
- Are additional measures to those in the Codex Code of Practice on Good Animal Feeding available to minimise unavoidable and unintended carryover in feed?

Stakeholder Meeting - participants

- RIKILT Wageningen University and Research;
- Phibro Animal Health Corporation;
- Aquaculture Stewardship Council;
- Health for Animals;
- Animal Health Europe; and
- International Feed Industry Federation (IFIF).

Stakeholder Meeting - purpose

to provide experts with information, knowledge and experience from relevant stakeholders and help them in taking their deliberations.

Stakeholders shared information on:

i. the problems they had encountered regarding carry-over in feed and transfer from feed to food of unavoidable and unintended residues of approved veterinary drugs;

ii. the measure(s) they had applied to prevent or control this problem; and

iii. their recommendations to address this problem.

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Content of the Expert Meeting Report

Current status of knowledge on veterinary drug residues carryover

- Sources of unavoidable and/or unintentional veterinary drug residues exposure at the feed mill and farm level

  - Feed and feeding practices
  - Regulation of feed production
  - Veterinary drugs used in feed

    Antimicrobials
    Coccidiostats
    Growth promotant β-adrenergic agonists

Content of the Expert Meeting Report

Human health risks due to the presence of veterinary drug residues in food from unavoidable and unintended carryover in feed and transfer form feed to food

- Chemical risks

- Microbiological risks

  - Antimicrobial resistance
  - Foodborne disease

Content of the Expert Meeting Report

Trade issues from residues in food at detectable levels in the absence of suitable regulatory provisions

Risk management strategies

- Significant risks
- Analytical capability
- Risk assessment
- Good animal feeding practices
- Action levels
- Application of the Codex Code of Practice on Good Animal Feeding
- Use of FAO/IFIF manual Good Practices for the Feed Sector

Conclusions and recommendations

Veterinary drug residues in food following drug carryover in feed are unlikely to be at concentrations high enough to result in human food safety hazards as expected exposure of non-target animals from carryover is less than the therapeutic dose for target animals.

However, human health risks cannot be ruled out in all circumstances.

Therefore, specific risk assessments may be required to determine if the level of carryover results in food residues that exceed Health based guidance values such as the Acute reference dose or Acute reference dose . Risk assessments for antimicrobial uses and antimicrobial residues at carryover concentrations in animal feed may require additional consideration for AMR.

Conclusions and recommendations

Ensuring safe feed is an important component of efforts to reduce and prevent food safety hazards from veterinary drug carryover.

Specific risk management options developed by the Expert Meeting include:

- Increase awareness and provide easily accessible information about possible implications for carryover from the use of authorised veterinary drugs, as part of a structured training programme for all competent authorities, professionals and workers;
- Strengthen national capacities for implementation of the Codex Code of Practice on Good Animal Feeding and related measures for animal feed production;

Conclusions and recommendations

- Emphasize that when possible, dedicated and separate lines for manufacturing medicated feed should be considered. However, the experts recognize that there may be practical limitations related to construction and maintenance of separate lines in feed mills;
- Direct prescribers and users of medicated feed to consider the appropriate selection of authorised drugs (including active ingredient, formulation and galenic form) to achieve expected therapeutic outcomes while considering carryover implications;
- Emphasize monitoring and control of raw feed ingredients that have potential for transfer of veterinary drugs from feed to food (e.g. identification and selection of appropriate raw feed ingredients, avoidance of hazardous raw materials);

Conclusions and recommendations

- Emphasize avoidance of the need to use medicated feed by implementing the use of animal health promoting practices and ingredients (e.g. good hygiene and husbandry practices, genetic selection, animal welfare, feed constituents, feed safety and adequate animal nutrition); and
- Include specific advice in the Codex Code of Practice on Good Animal Feeding on HACCP-identified control points for carryover during transport from feed mill to farm.

For more information

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thank you