

# Categorization of Antimicrobial Drugs



**FAAST**  
FARMED ANIMAL ANTIMICROBIAL  
STEWARDSHIP

Animal Owner FAASTsheet 3 of 9

## Understanding Antimicrobials

Governments around the world have recognized the growing threat that antimicrobial resistance (**AMR**) has on our ability to treat infections in humans

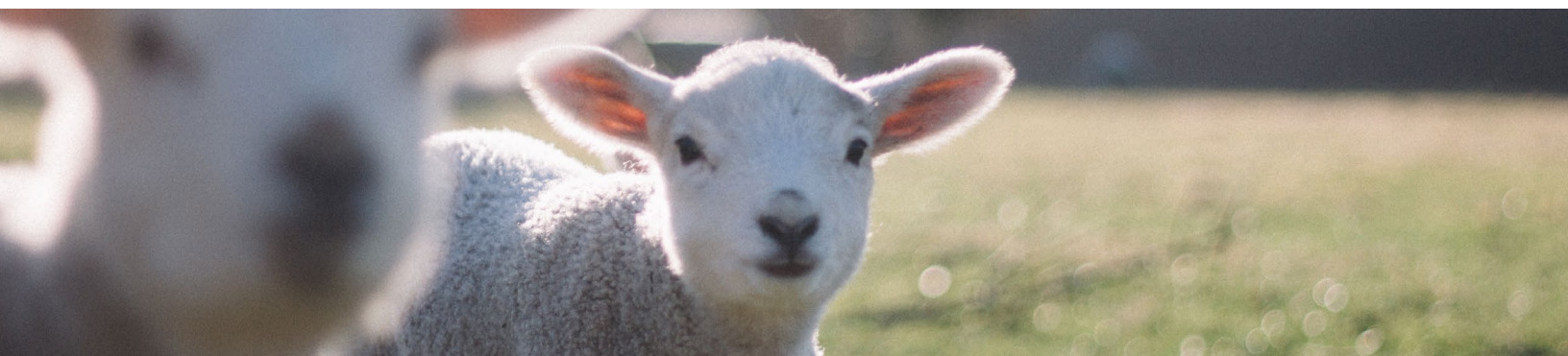
**Why is this so important for animal health?** Many of the same antimicrobials used to treat and prevent infections in human medicine are also used in animals.

Some antimicrobials are more important than others for treating people. Health Canada classifies them into four categories, based on whether:

**1** The antimicrobial is a preferred option for treating serious infections in humans

**and**

**2** The antimicrobial is a 'last resort' drug with few or no alternative treatment options available



# Table 1. Health Canada Categories for Antimicrobials

Category	Importance to Human Medicine	Why?
I	<b>Very High Importance</b>	These antimicrobials are essential for the treatment of serious human illnesses. Very few or no alternatives are available if these don't work.
II	<b>High Importance</b>	These antimicrobials treat a variety of serious infections. Alternatives are generally available if needed, including Category I antimicrobials.
III	<b>Medium Importance</b>	These antimicrobials treat a variety of less serious infections. Alternatives are generally available, including Category I and II antimicrobials.
IV	<b>Low Importance</b>	These antimicrobials are not currently used in human medicine.

Most Important  
↑  
↓  
Least Important

Antimicrobials in Categories I, II, and III are considered medically important antimicrobials (**MIAs**)



While AMR is a concern for all drug products, we are most concerned with preventing resistance to medically important antimicrobials (Category I, II and III antimicrobials)

### What drugs fall into these categories?

The Canadian Animal Health Institute, the Animal Nutrition Association of Canada, and industry partners have developed a useful table to identify the key antimicrobials that fall into each category. Visit <https://www.cahi-icsa.ca/antimicrobial-stewardship> to view this image in full.

**Table 2. Health Canada Classification of Antimicrobial Agents Based on Level of Importance in Human Medicine**

Category	Class (example)
<b>Category I Very High Importance</b>	<ul style="list-style-type: none"><li>• Carbapenems (Imipenem)</li><li>• Cephalosporins (3rd &amp;4th gen)(Ceftiofur)</li><li>• Fluoroquinolones (Enrofloxacin)</li><li>• Glycopeptides (Vancomycin)</li><li>• Glycyclines</li><li>• Ketolides</li><li>• Lipopeptides</li><li>• Monobactams</li><li>• Nitroimidazoles (Metronidazole)</li><li>• Oxalolidinones</li><li>• Penicillin-<math>\beta</math>-lactamase inhibitors (Amoxicillin/Clavulanic Acid)</li><li>• Polymixins (colistin, polymixin B)</li><li>• Therapeutic agents for TB</li></ul>
<b>Category II High Importance</b>	<ul style="list-style-type: none"><li>• Aminoglycosides (Gentamycin)</li><li>• Cephalosporins (1st and 2nd gen - Cefapirin)</li><li>• Fusidic acid</li><li>• Lincosamides (Lincomycin)</li><li>• Macrolides (Tulathromycin)</li><li>• Penicillins</li><li>• Quinolones (except fluoroquinolones)</li><li>• Streptogramins (Virginiamycin)</li><li>• Trimethoprim/sulfamethoxazol</li></ul>
<b>Category III Medium Importance</b>	<ul style="list-style-type: none"><li>• Aminocyclitols (Streptomycin)</li><li>• Aminoglycosides</li><li>• Bacitracins</li><li>• Fosfomycin</li><li>• Phenicols (Florfenicol)</li><li>• Sulphonamides (Sulphathiazole)</li><li>• Tetracyclines (Oxytetracycline)</li><li>• Trimethoprim</li></ul>
<b>Category IV Low Importance</b>	<ul style="list-style-type: none"><li>• Flavophospholipols (Bambermycin)</li><li>• Ionophores (Monensin)</li></ul>