



Organisation
Mondiale
de la Santé
Animale

World
Organisation
for Animal
Health

Organización
Mundial
de Sanidad
Animal

Collection of quantitative data on the use of antimicrobial agents in animals: the OIE database

**Regional Seminar OIE National Focal Points for
Veterinary Products
Entebbe, Uganda, 1-3 December 2015**

Dr François Diaz
OIE Scientific and Technical Department



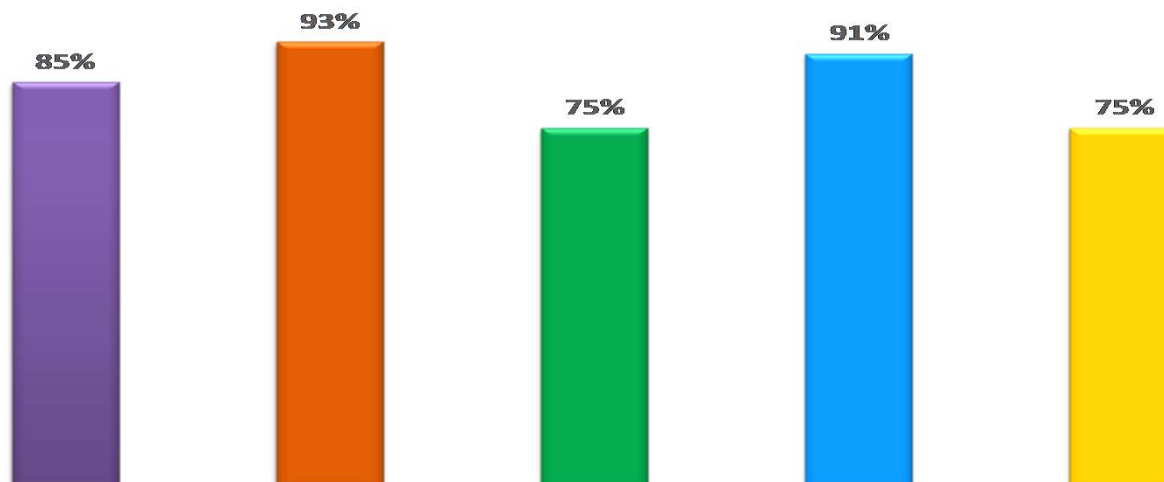
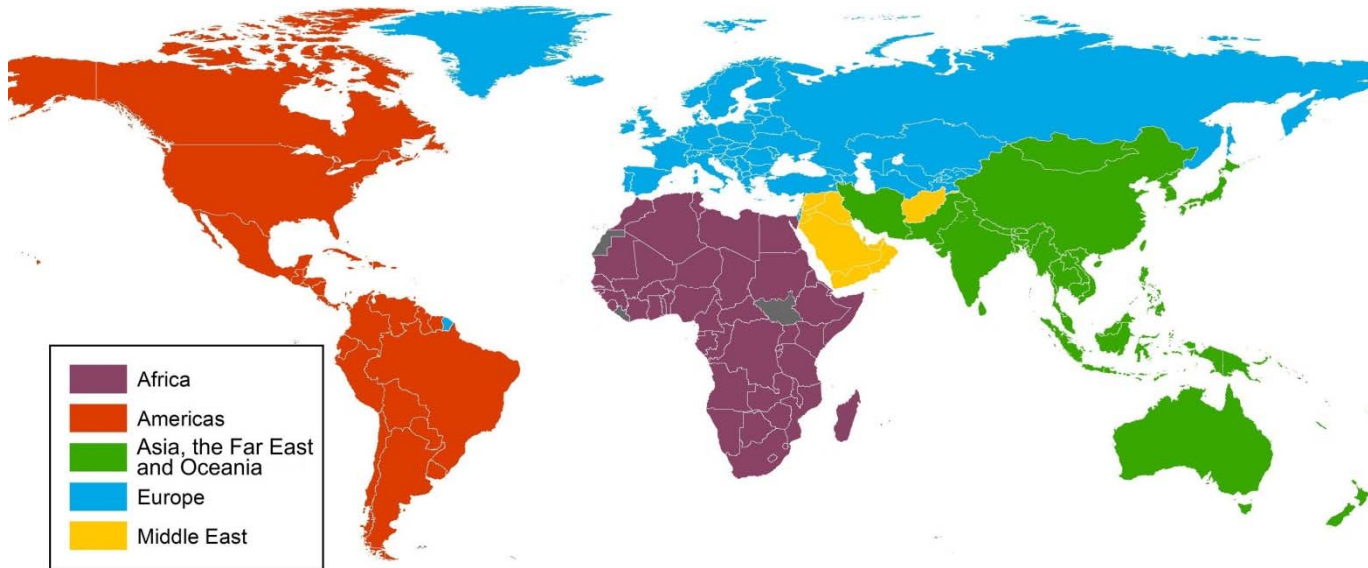
Situation worldwide – OIE Survey

- OIE developed a questionnaire in 2012 on monitoring the quantities of antimicrobial agents used in animals
- Questionnaire sent to all the OIE Delegates and copied to the OIE National Focal Points for Veterinary Products in June 2012 (final deadline September 2012)
- Results presented at the OIE Global Conference on the Responsible and Prudent Use of Antimicrobial Agents for Animals held in March 2013 in Paris, France

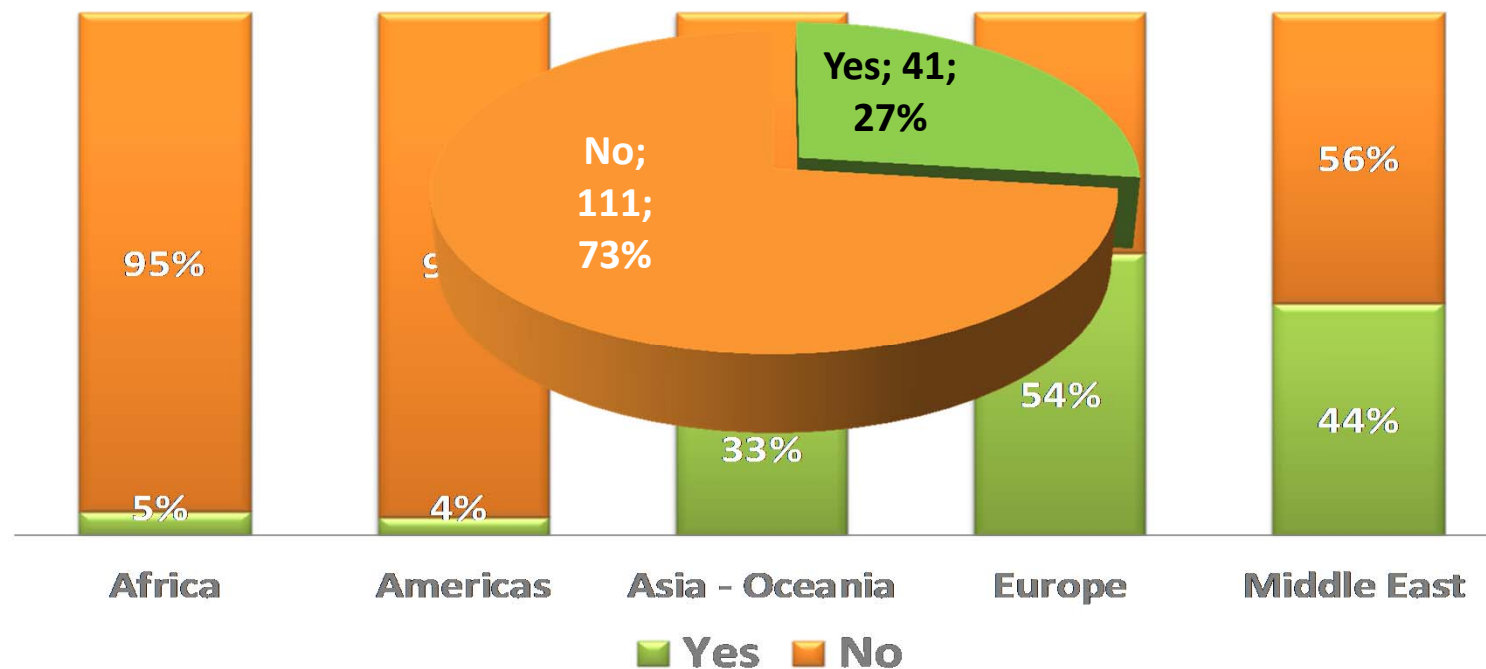
OIE Survey - Objectives

- to enhance the OIE's engagement in the initiative to prevent antimicrobial resistance;
- to conduct a survey of the implementation by OIE Member Countries of OIE *Terrestrial Animal Health Code* Chapter 6.8. "Monitoring of the quantities and usage patterns of antimicrobial agents used in food producing animals" and OIE *Aquatic Animal Health Code* Chapter 6.3. "Monitoring of the quantities and usage patterns of antimicrobial agents used in aquatic animals";
- to improve awareness and provide an overview of antimicrobial use in animals by OIE Member Countries;
- to determine what actions are needed and to help the OIE to develop its strategy in this field.

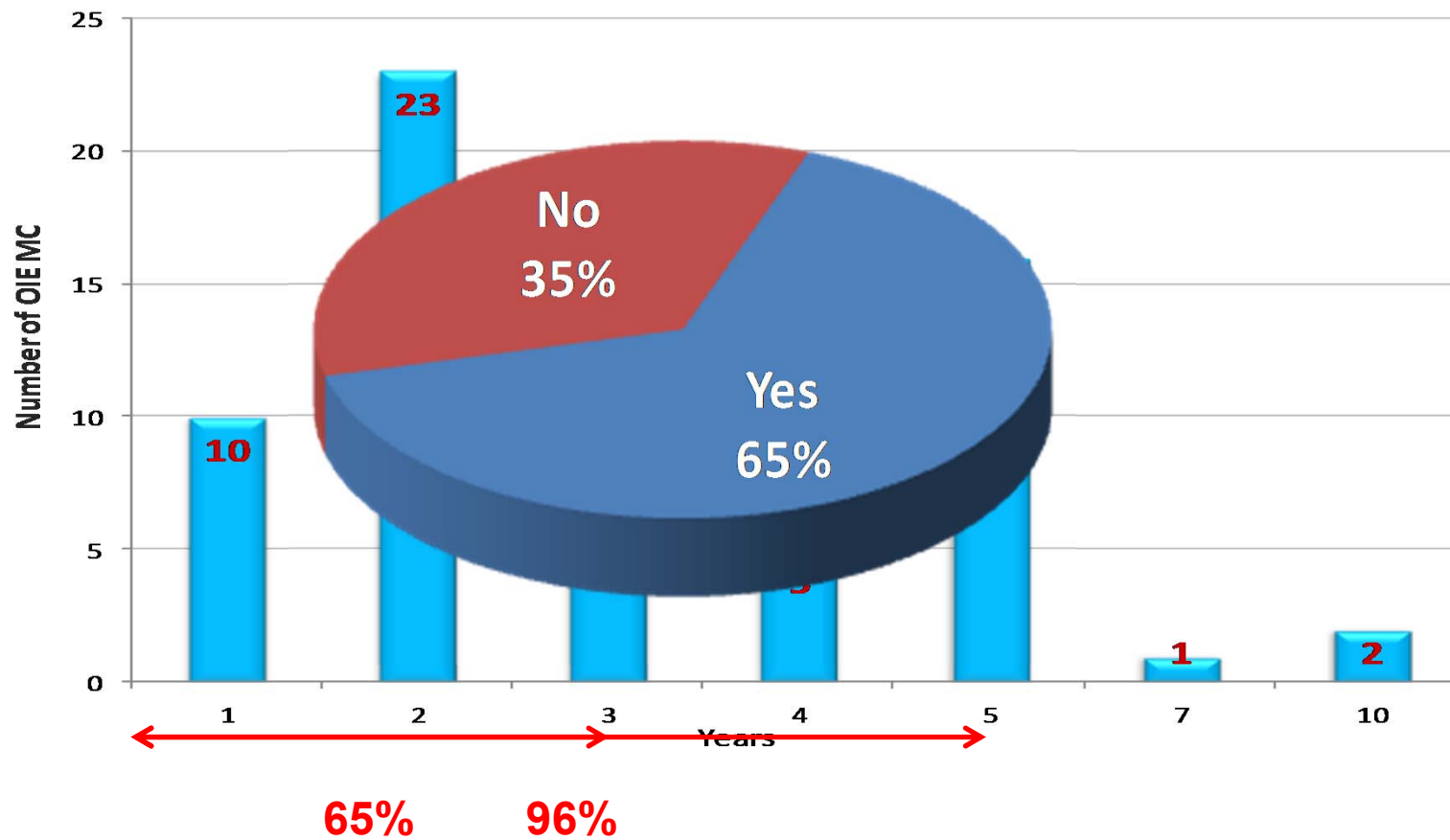
Proportion of OIE Member Countries submitting questionnaires by OIE Regions



Proportion of OIE Member Countries with an official system for collecting quantitative data



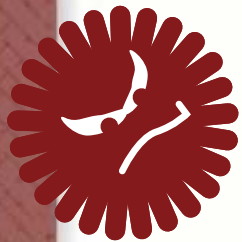
Plan to set up an official system to collect quantitative data - Worldwide



OIE GLOBAL CONFERENCE ON THE RESPONSIBLE AND PRUDENT USE OF ANTIMICROBIAL AGENTS FOR ANIMALS

**International Solidarity to Fight against
Antimicrobial Resistance**

Paris (France), 13–15 March 2013



Recommendations of the OIE Global Conference on the responsible and prudent use of antimicrobial agents for animals

To the OIE Member Countries

3. To develop and set up an official harmonised national system for collecting data on the monitoring of antimicrobial resistance in relevant animal pathogens and quantities of antimicrobial agents used in food producing animals at the national level based on the OIE standards.

To the OIE

7. To collect harmonised quantitative data on the use of antimicrobial agents in animals with the view to establish a global database.

OIE global database on the use of antimicrobial agents in animals

- An OIE *ad hoc* Group was convened to:
 - ✓ establish an overall approach to collect and report standardised quantitative data on antimicrobial agents used in animals supporting implementation of Chapter 6.8 of the *Terrestrial Animal Health Code* and 6.3 of the *Aquatic Animal Health Code*.
 - ✓ address recommendation no 7 of the OIE Global Conference on the Responsible and Prudent Use of Antimicrobial Agents for Animals

OIE global database on the use of antimicrobial agents in animals

- First meeting was held in January 2014, second meeting in July 2014, third meeting in December 2014 and fourth one in August 2015
- Fifth meeting in January 2016
- International experts + Representatives from FAO and WHO

OIE global database on the use of antimicrobial agents in animals

OIE data collection template:

- 4 pages labelled Baseline information / Reporting option 1 / Reporting option 2 / Reporting option 3
- All OIE Member Countries should complete the Baseline Information
- Depending of the level of detail available in the reporting country, either page labelled « Reporting option » 1, 2 or 3 should be completed

The OIE approach

- 1 • A system where all can contribute
- 2 • That safeguards sensitive information
- 3 • That is pragmatic regarding the data collected
- 4 • That compare apples with apples

1. A system where all can contribute

- Baseline information *[All]*
 - all OIE Member Countries (MCs) can provide at least part of the requested details
- Reporting Option 1 – limited differentiation *[Some]*:
 - a. One can summarise all amounts into one figure (overall amount used for all purposes in all animal species) or
 - b. Report for all animal species together, differentiated by:
 - Substance class
 - Therapeutic use versus growth promotion use

1. A system where all can contribute

OIE data collection template – Reporting option 1:

OIE template for the collection of data on antimicrobial agents for use in animals			
Reporting option 1 - Overall amount sold for/used in animals by antimicrobial class; with the possibility to separate by type of use			
	Overall amount (Growth promotion + Therapeutic use)	Amount for Therapeutic use (including prevention of clinical signs)	Amount for Growth promotion
Antimicrobial class	All animal species (kg)	All animal species (kg)	All animal species (kg)
Aminoglycosides			
Amphenicols			
Arsenicals			
Cephalosporins (all generations)			
1-2 gen. cephalosporins			
3-4 gen cephalosporins			
Fluoroquinolones			
Glycopeptides			
Glycophospholipids			
Lincosamides			
Macrolides			
Nitrofurans			
Orthosomycins			
Other quinolones			
Penicillins			
Pleuromutilins			
Polypeptides			
Quinoxalines			
Streptogramins			
Sulfonamides (including trimethoprim)			
Tetracyclines			
Others			
Aggregated class data			
Total kg			

1. A system where all can contribute

- Reporting Option 2 – more differentiation options [*Fewer*]:
 - a. One can summarize all amounts into one figure (overall amount used for all purposes in all animal species) or
 - b. Differentiate by:
 - Substance class
 - Therapeutic use versus growth promotion use in all animal species
 - Differentiate therapeutic use for animal species groups
 - ➔ All food-producing animals
 - ➔ Terrestrial food producing animals
 - ➔ Aquatic food-producing species

1. A system where all can contribute

OIE data collection template – Reporting option 2:

OIE template for the collection of data on antimicrobial sales for use in animals
Reporting option 2 - Overall amount sold for/used in animals by antimicrobial class; with the possibility to separate by type of use and species group

Antimicrobial class	Overall amount (Growth promotion + Therapeutic use)	Amount for Therapeutic use (including prevention of clinical signs)			Amount for Growth promotion	
	All animal species (kg)	All animal species (kg)	All food producing animals (terrestrial and aquatic) (kg)	Terrestrial food producing animals (kg)	Aquatic food producing animals (kg)	All food producing animals (terrestrial and aquatic) (kg)
Aminoglycosides						
Amphenicols						
Arsenicals						
Cephalosporins (all generations)						
1-2 gen. cephalosporins						
3-4 gen cephalosporins						
Fluoroquinolones						
Glycopeptides						
Glycophospholipids						
Lincosamides						
Macrolides						
Nitrofurans						
Orthosomyclins						
Other quinolones						
Penicillins						
Pleuromutillins						
Polypeptides						
Quinoxallines						
Streptogramins						
Sulfonamides (including trimethoprim)						
Tetracyclines						
Others						
Aggregated class data						
Total kg						
If 'Aggregated class data' are reported, please list here the classes combined	<free text field>	List all classes for which the amounts were combined, using whenever possible the 'Antimicrobial class' terms or the terminology of the OIE list of antimicrobial agents of veterinary importance. Substances included in the data aggregation that are not part of the recommended terminology should also be listed. If one class was reported that needs to remain confidential, please enter 'Confidential'.				
If 'Others' are reported under 'Antimicrobial class', list here the classes reported	<free text field>	Describe the class or classes reported as 'Others', using whenever possible the terminology of the OIE list of antimicrobial agents of veterinary importance.				

1. A system where all can contribute

- Reporting Option 3 – most differentiation options [*Fewest*]:
 - a. One can summarize all amounts into one figure (overall amount used for all purposes in all animal species) or
 - b. Differentiate by:
 - Substance class
 - Therapeutic use versus growth promotion use in all animal species
 - Differentiate therapeutic use for animal species groups
 - ➔ All food-producing animals
 - ➔ Terrestrial food producing animals
 - ➔ Aquatic food-producing species
 - Differentiate therapeutic use also by most important routes of administration
 - ➔ Oral route
 - ➔ Injection route
 - ➔ Other routes

1. A system where all can contribute

OIE data collection template – How to choose the suitable option:

REPORTING OPTIONS	
1	Overall amount sold for/used in animals by antimicrobial class ; with the possibility to separate by type of use
2	Overall amount sold for/used in animals by antimicrobial class; with the possibility to separate by type of use and species group
3	Overall amount sold for/used in animals by antimicrobial class; with the possibility to separate by type of use, species group and route of administration

2. A system that safeguards sensitive information

- Confidentiality of commercially sensitive information
- OIE approach: an aggregate reporting option
- Example:
 - In one country only one company sells tiamulin, no other pleuromutilin antibiotic is sold in that country
 - If the total amount of tiamulin is reported under the class Pleuromutilins, all competitors immediately know the size of the tiamulin business
 - Aggregate reporting allows the summing up of amounts for several sensitive antimicrobials
- Proviso:
 - The names of the aggregates substance should be listed in the baseline information sheet. Such data aggregations may contain substance not required in the OIE template, e.g. ionophores, and we need to know when they are included.

3. A pragmatic system

IDEAL WORLD

- Amounts used in animals
- Only active parts of molecules are counted
- Comparable data are collected from comparable system

REAL WORLD (OIE DATA)

- Amounts imported or sold for animals in kg
- Mostly the complete molecule (chemical compound as listed on the label) is counted
- Data from many different systems are reported

4. Comparing apples with apples

The OIE template

- 4 sheets, three reporting option choices, allowing for 5 kinds of reporting

Baseline info only, Baseline info + indication of antibiotics used,

Baseline info + reporting option 1 or 2 or 3

- relevant explanatory baseline information

Result:

- Understand distinctions between countries & systems
- Understand peculiarities of similar seeming systems
- Allows identification of information for reporting for transparency reasons without breaching confidentiality

Tools for using the OIE template

World-Organisation-for-Animal-Health-2015

Guidance-for-completing-the-OIE-template-for-the-collection-of-data-on-antimicrobial-agents-used-in-animals

Contents

- Introduction..... 1
- Introducing the individual sheets of the OIE template for the collection of data on antimicrobial agents used in animals..... 2
- Required information and choices for reporting..... 2
- Baseline information..... 2
 - Reporting option 1 (overall amount sold for / used in animals by antimicrobial class, with the possibility to separate by type of use)..... 2
 - Reporting option 2 (overall amount sold for / used in use animals by antimicrobial class, with the possibility to separate by type of use and species group)..... 3
 - Reporting option 3 (overall amount sold for / used in animals by antimicrobial class, with the possibility to separate by type of use, species group and route of administration)..... 3
- Guidance notes on the data to be provided in the OIE template..... 3
- Explanation of terms used in the context of the OIE template and related documents..... 3
- Baseline information..... 4
- Classes of antimicrobial agents for reporting..... 6
- Reporting options 1, 2 and 3: Reporting quantities of antimicrobial agents..... 8
- Reporting option 1, 2 and 3: Differentiation by type of use..... 8
- Reporting option 2 and/or 3: Differentiation by animal species group..... 8
- Reporting option 3: Differentiation by routes of administration..... 9
- Calculating the quantities to report in Reporting options 1, 2 and 3..... 9

Introduction

The OIE proposes to collect data on antimicrobial agents used in animals from OIE Member Countries implementing Chapters 6.8 - Monitoring of the quantities and usage patterns of antimicrobial agents used in food-producing animals of the OIE *Terrestrial Animal Health Code* and 6.3 - Monitoring of the quantities and usage patterns of antimicrobial agents used in aquatic animals of the OIE *Aquatic Animal Health Code*, and to contribute to the global effort against antimicrobial resistance.

Member Countries differ in the degree to which they collect, collate and publish data on antimicrobial sales or use in animals and also in the degree to which they can stratify the quantities of antimicrobial agents used in animals or used in different animal species.

Through this initiative, by means of a specific template (OIE template), the OIE seeks to collect data on antimicrobial agent use in animals from all OIE Member Countries in a harmonised way. Using a phased approach, the OIE will initially focus on sales of antimicrobial agents

3. Sales in the context of the OIE data collection on antimicrobial agents used in animals should be interpreted to include data on import of antimicrobial agents for use in animals.

Version 2 - Nov 2015 Page 1 of 9

Annex to the Guidance for Completing the OIE template for the collection of data on Antimicrobial Agents used in Animals

Considerations on converting content of antimicrobial active ingredients in veterinary medicines into kilograms

Calculating the quantities to report in kilogram (kg)

Data on antimicrobial agents intended for use in animals comes in different forms. The OIE template for the collection of data on antimicrobial agents used in animals (OIE template) is designed to collect data on the amounts of chemical compound as declared on the product label. The information may vary, ranging from bulk quantities of antimicrobial agents to numbers of packs of a veterinary medicinal product. The content of antimicrobial agents in such products can be stated in a number of possible ways. It will be necessary, where appropriate, to calculate the required data to populate the OIE template.

Detailed instructions are provided to harmonise some aspects of data reporting

- Transformation of bulk quantities (section 1) - use this section if you need to convert quantities of raw material, e.g. from import data into the required format.
- Data on veterinary medicinal products (section 2), including conversion from International Units (IU) to kg (section 2. (ii))
- Recommendations are made in section 3 for further optional conversions, aimed at achieving refined reporting of active entities, the ultimately desired format. If such calculations are made, they should be reported in the free text field provided on the sheets for Reporting Option 1, 2 and 3.

The following abbreviations and symbols will be used.

Symbol/abbreviation	Explanation
Strength	amount of antimicrobial agent per unit of veterinary product
% w/v	percent weight per volume
mg	milligram
g	gram
kg	kilogram
t	ton (metric)
ml	millilitre
l	litre

1. For data on bulk quantities

Such information is usually sourced from customs, import or other bulk trading. It will likely come as a weight in a number of possible units (e.g. metric tons) of chemical compound and needs to be converted to kg. When conversion into kg is necessary, follow the steps below. If additional conversion factors are needed, please contact the OIE at antimicrobialuse@oie.int.

Step 1 → Multiply the amount of antimicrobial agent, i.e. the chemical compound as declared on the product label with the appropriate conversion factor from the table 1 below.

$$\text{Antimicrobial agent (kg)} = \text{antimicrobial agent (unit 2)} \times \text{conversion factor}$$

Unit reported (unit 2)	Conversion factor to kg (for multiplication)
Metric ton	1000
Imperial ton (long)	1016
Imperial ton (short)	907.185
Stone (Imperial)	6.350
Imperial Pound	0.4536
Ounce	0.02835

Version 2 - Nov 2015 Page 1 of 6

In case of questions contact the OIE Scientific and Technical department (SST) by email at antimicrobialuse@oie.int



Thank you for your attention



Organisation Mondiale
de la Santé Animale

World Organisation
for Animal Health

Organización Mundial
de Sanidad Animal

12 rue de Prony, 75017 Paris, France - www.oie.int – oie@oie.int

