



EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

ESVAC data on consumption of veterinary antimicrobial agents in 2010 from 19 EU/EEA countries

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Outline

- Approach
- Results



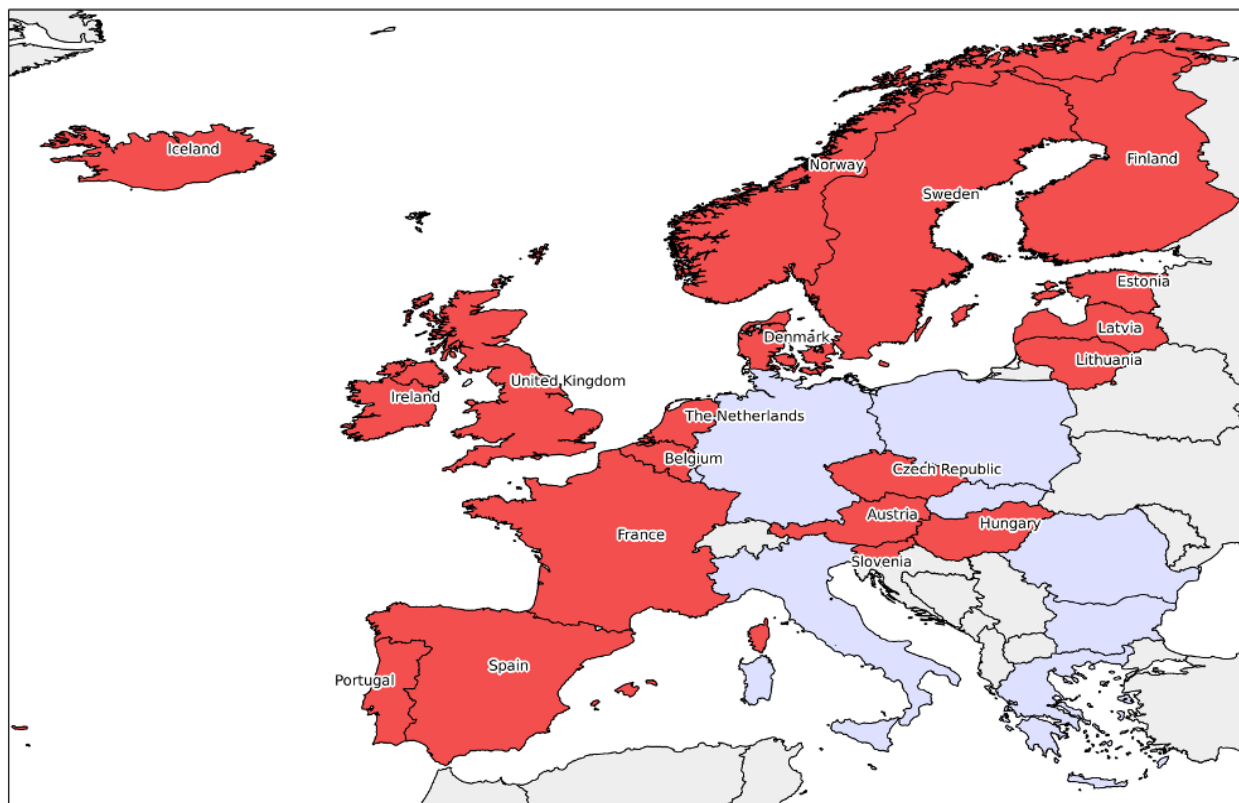
Sales of veterinary antimicrobial agents in 19 EU/EEA countries in 2010

Second ESVAC report





Countries participating in ESVAC 2010*



*Italy has recently provided data for 2010. Will be included in 2011 report

ESVAC 1st report:
8 EU/EEA countries
provided data
aggregated by
class

ESVAC 2nd report:
19 EU/EEA
countries provided
data according to
the ESVAC
template implying
that the 8 original
countries had to
change their data
collection system



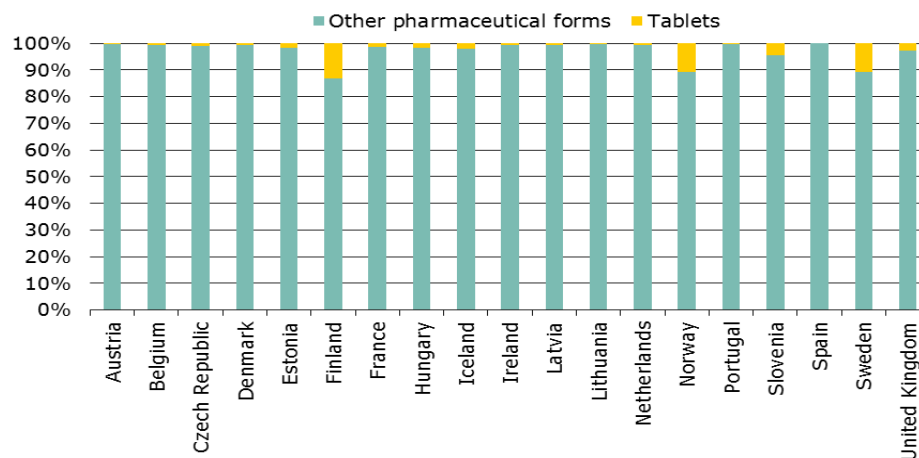
Approach collecting and quality check of 2010 data on overall sales

- ESVAC protocol, data collection form and data base/program developed and tested in a pilot study 2010
- Training on how to fill in the template and technical support (one to one) MSs
- Data checked
 - If standardised by application of the ESVAC data program and for harmonisation (manually) e.g. conversion factors
 - For validity (manually) e.g. by identification of obvious outliers; strengths different from in names



Approach cont.

- The population correction unit (PCU) used as a proxy for the animal biomass of food producing species at risk for being treated in the country of question. Takes into account transport of animals for slaughter or fattening in another MS
- Tablets used almost solely in companion animals - excluded from the data prior to analysis of the data together with PCU





Approach cont.

- The main indicator used to report overall sales and sales by antimicrobial class by country in ESVAC is mg active ingredient/PCU (1 PCU = 1 kg)

$$\frac{\text{Amounts sold in tonnes} \times 10^9}{\text{Numbers of PCU}}$$



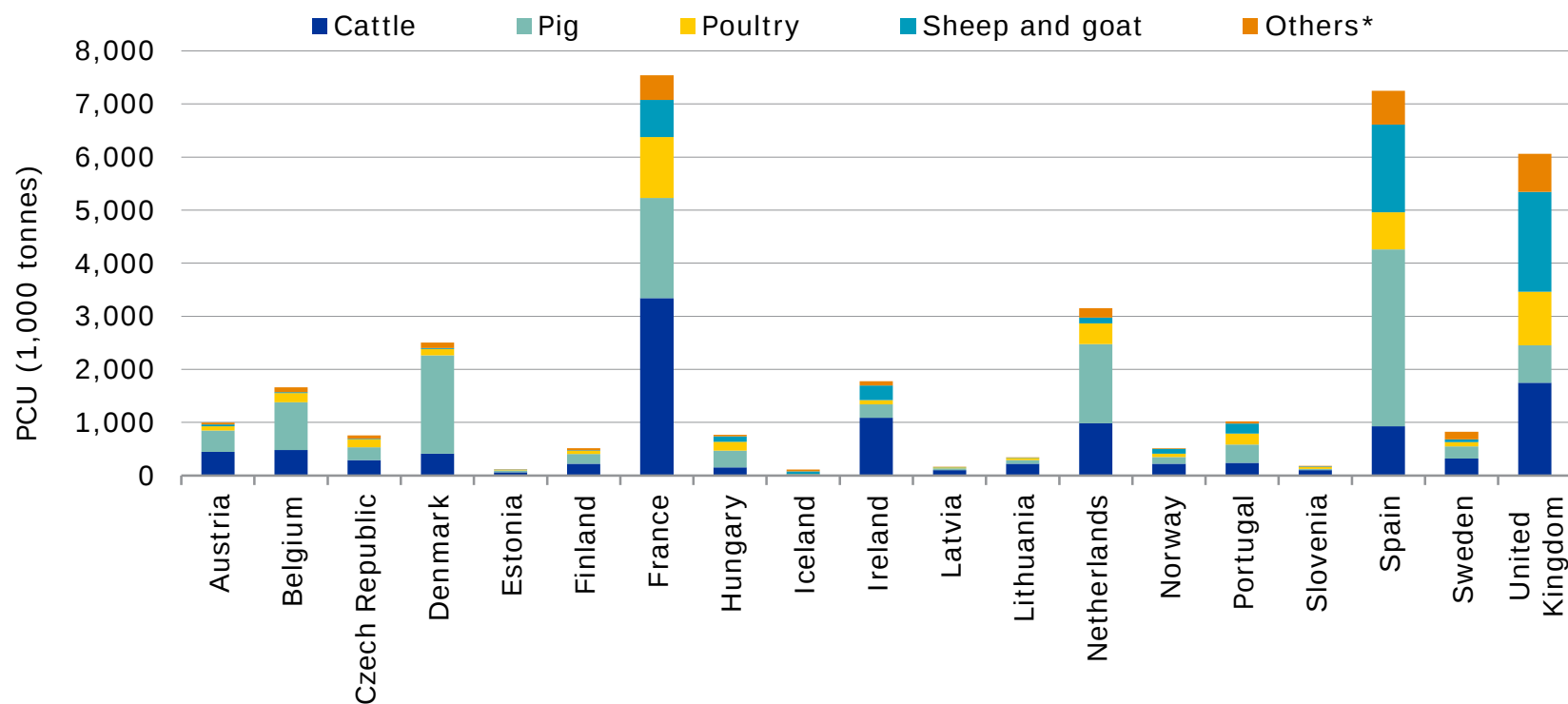
ESVAC 2010 report - disclaimer

- It is generally agreed that it takes at least three to four years in order to establish a valid baseline for the data on sales of veterinary antimicrobial agents. Consequently, the data from countries that have collected such data for the first time should be interpreted with due caution.
- It should be emphasised that the data presented in this report should not be used alone as a basis for setting management priorities, but should always be considered together with data from other sources.



Results

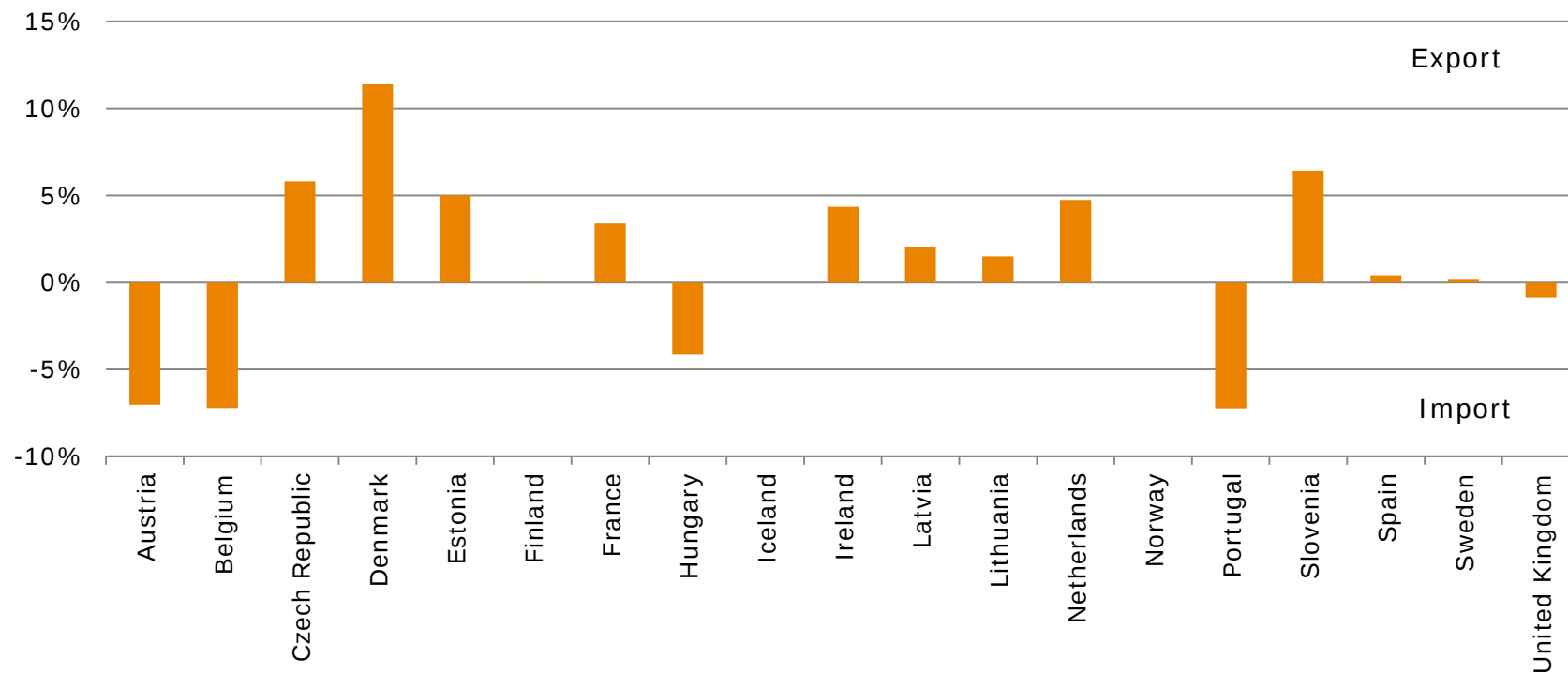
PCU (in 1,000 tonnes) of the various food producing animal species, including horses, in 2010, by country





Results cont.

Net export and net import¹, as percentage of the total PCU, of animals for fattening or slaughter in another Member State for 2010

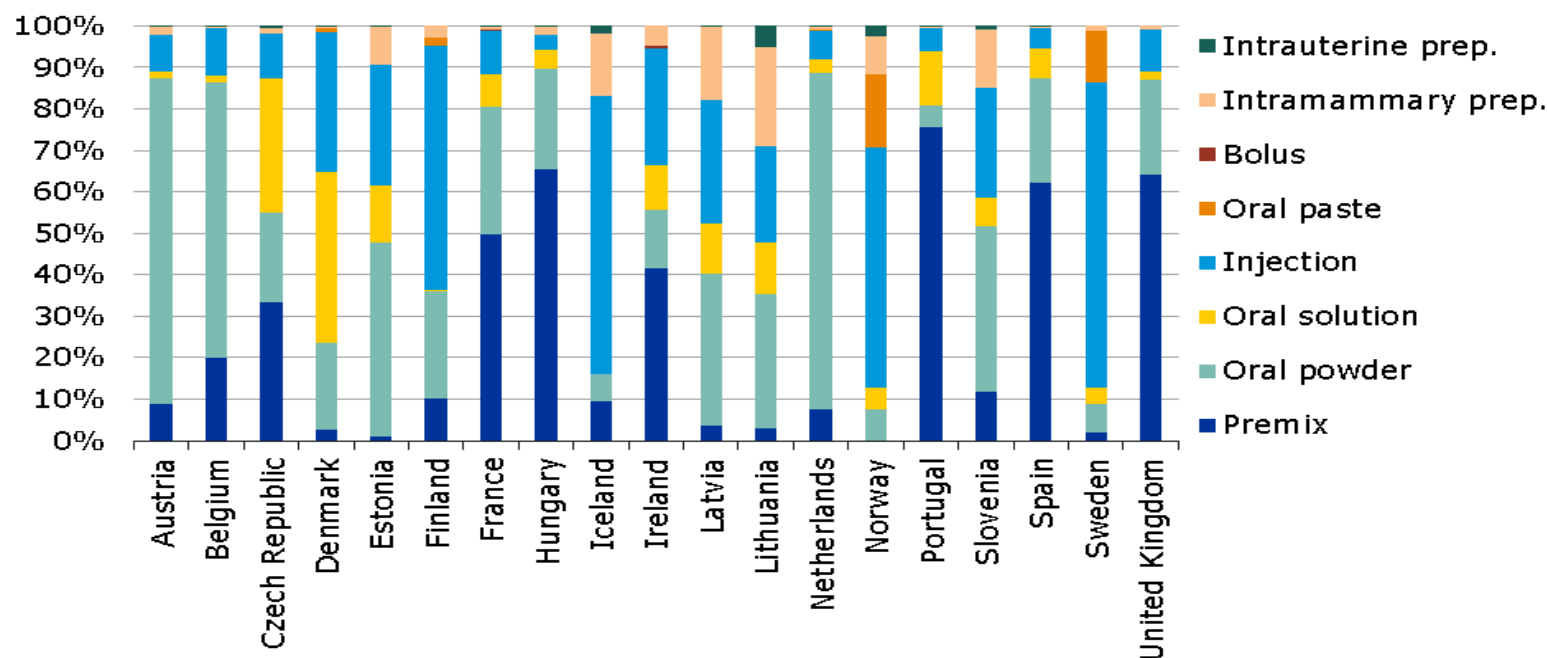


Net export and net import¹, as percentage of the total PCU, of animals for fattening or slaughter in another Member State for 2010



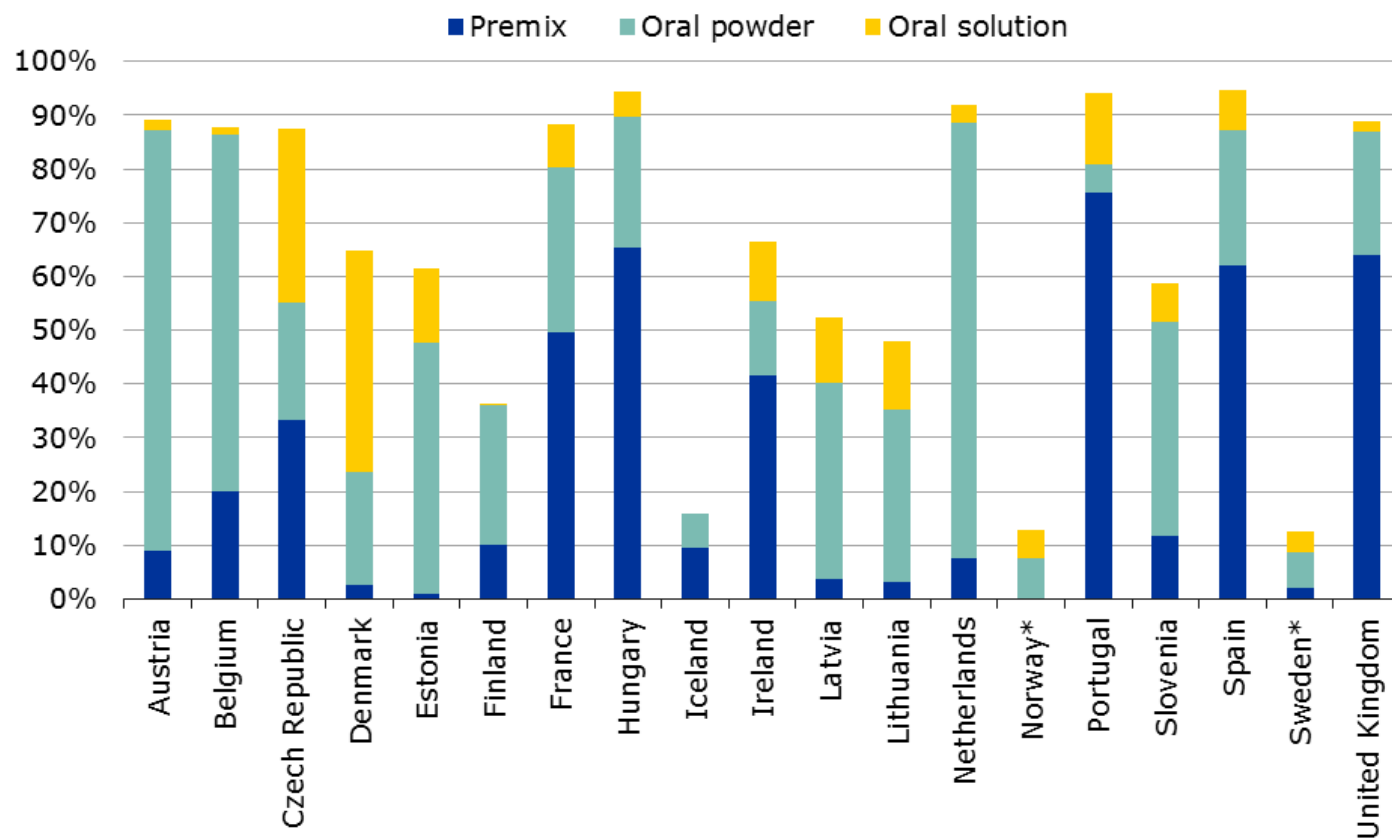
Results cont.

Distribution of sales of veterinary antimicrobial agents for food producing animals (including horses), in mg per population correction unit (mg/PCU), by pharmaceutical forms by country for 2010





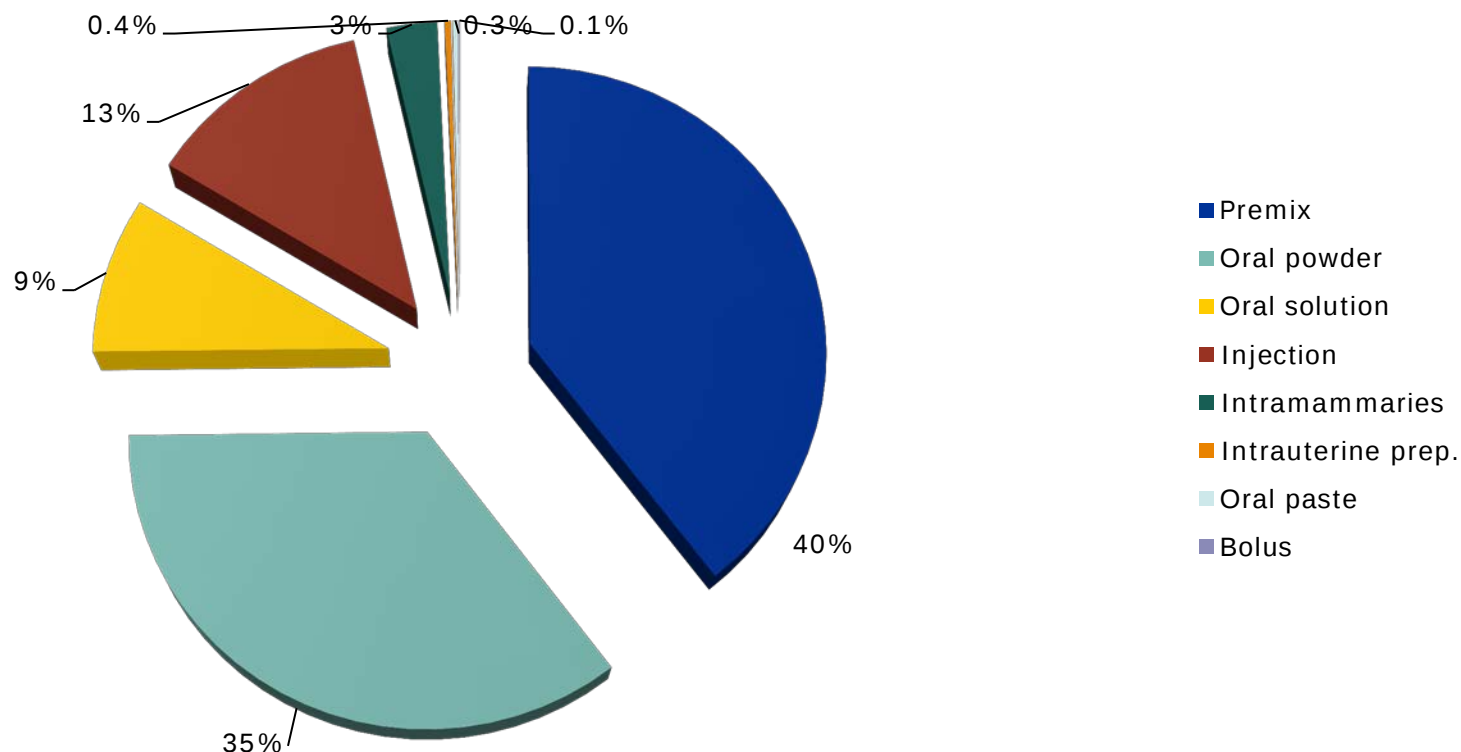
Oral solution, oral powder and premixes as percentages of total sales, in mg per population correction unit (mg/PCU), of veterinary antimicrobial agents for food producing animals (including horses) by country in 2010





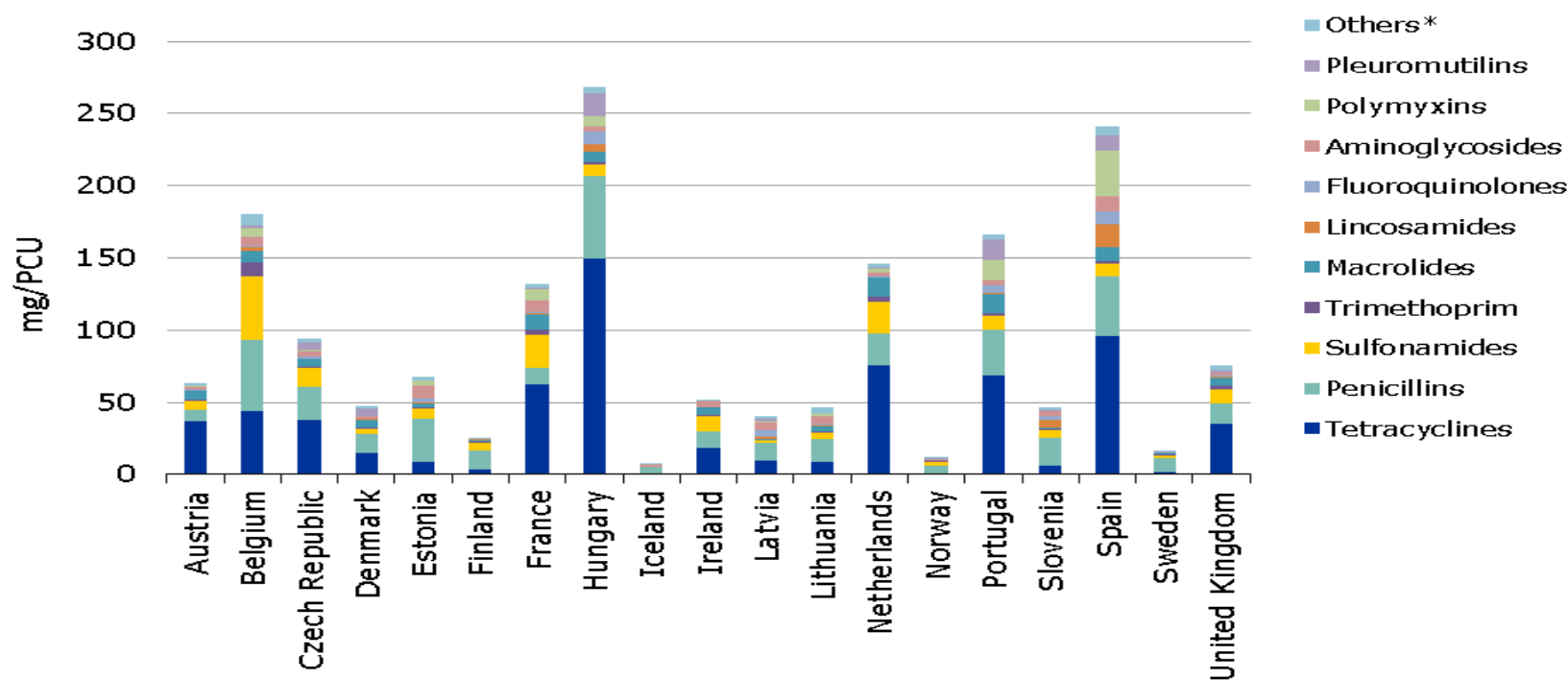
Sales of veterinary antimicrobial agents in 2010 in 19 countries by form, in mg/PCU

84% for herd treatment





Sales for food producing species, including horses, in mg/PCU, of the various veterinary antimicrobial classes in 2010 by country¹

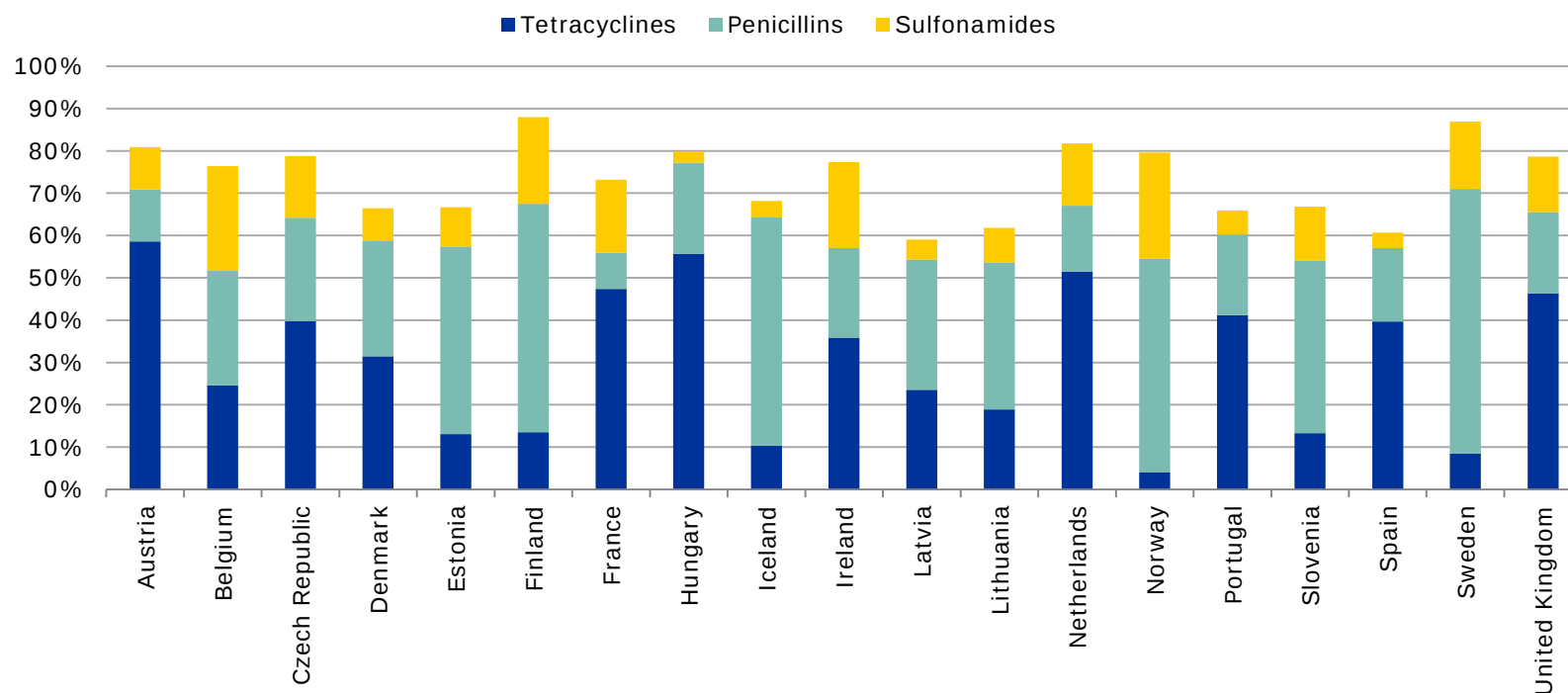


¹Differences between countries can partly be explained by differences in animal demographics, in the selection of antimicrobial agents and in dosage regimes, among other factors

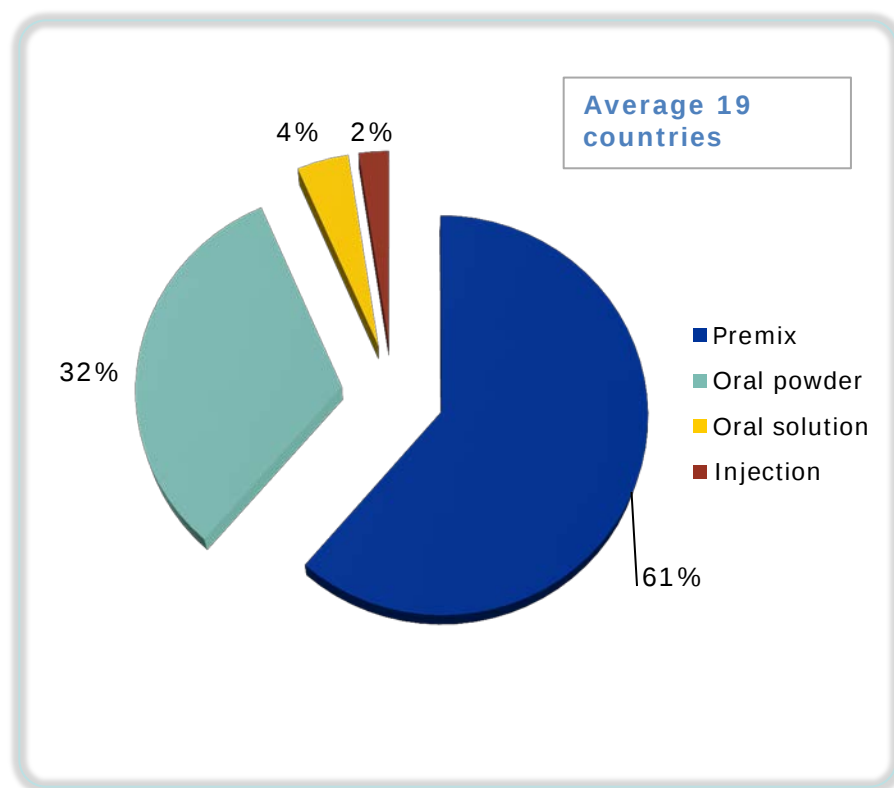
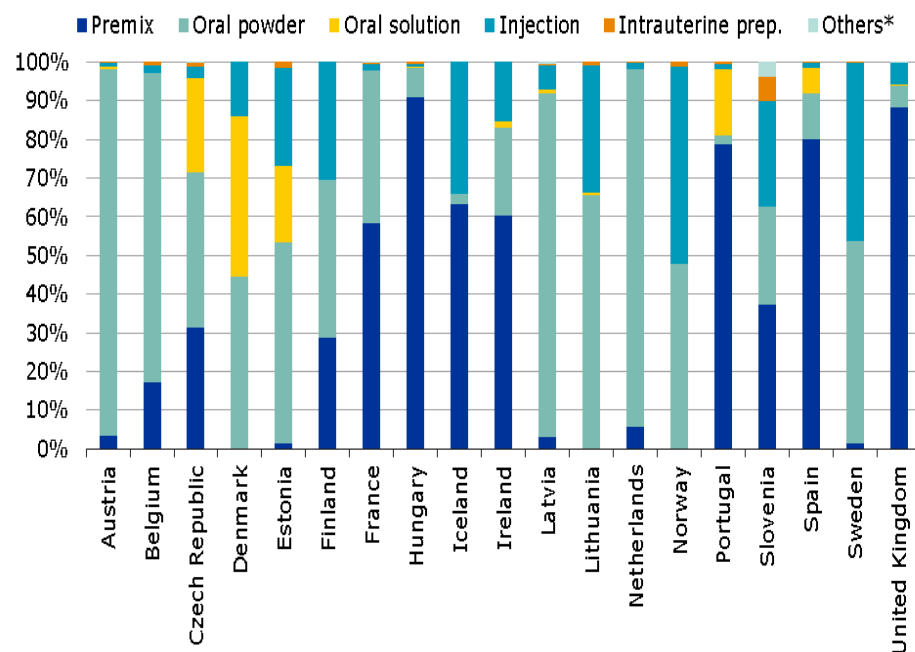


Sales of tetracyclines, penicillins and sulfonamides as a percentage of the total sales for food-producing species, including horses, in mg/PCU, by country, for 2010

Average 19 countries 73%

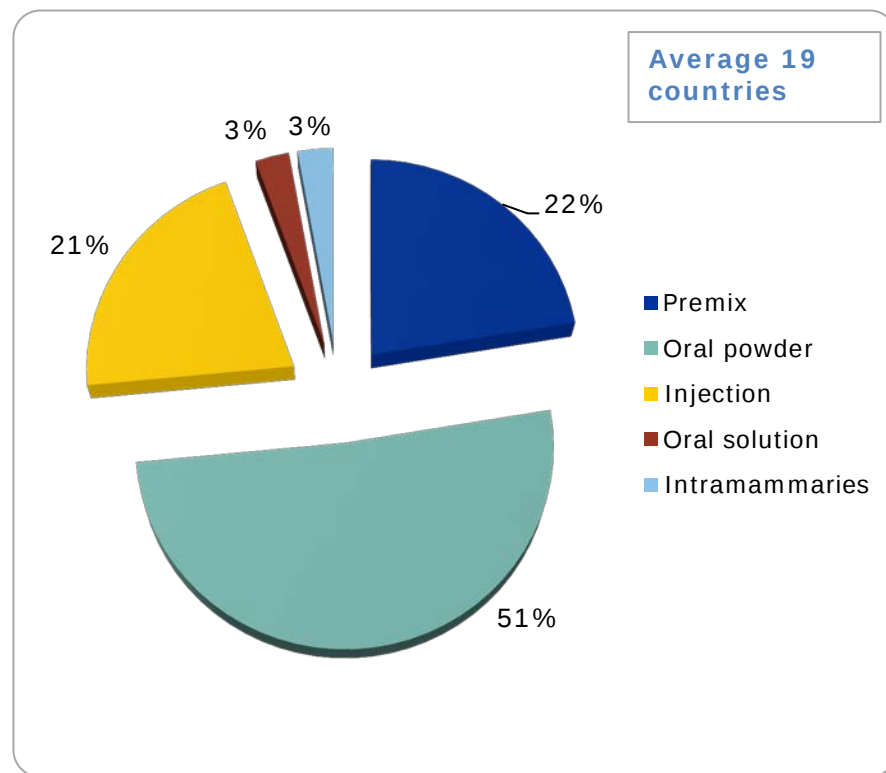
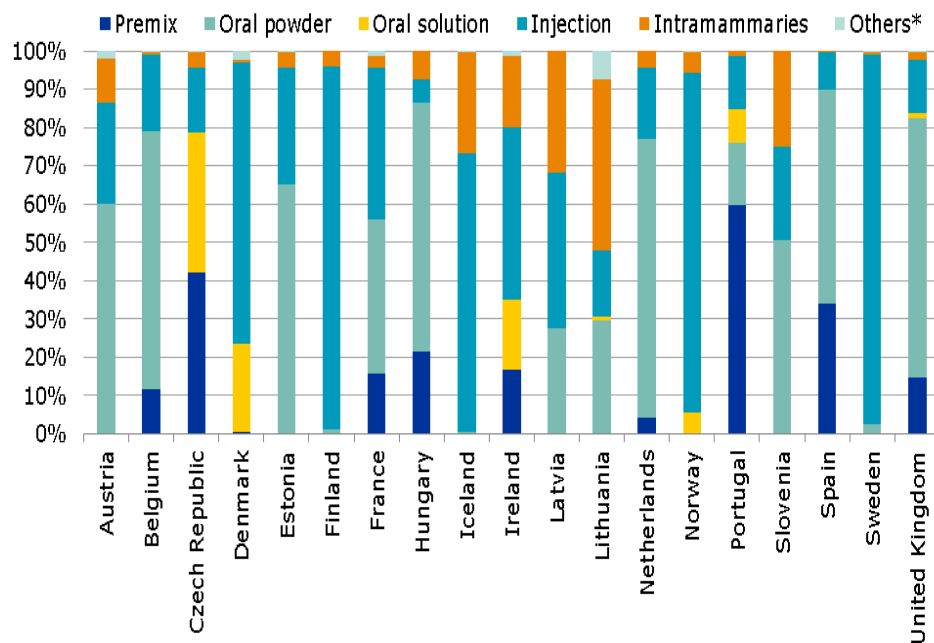


Distribution of sales by pharmaceutical form for tetracyclines, in tonnes of active ingredient, by country, for 2010



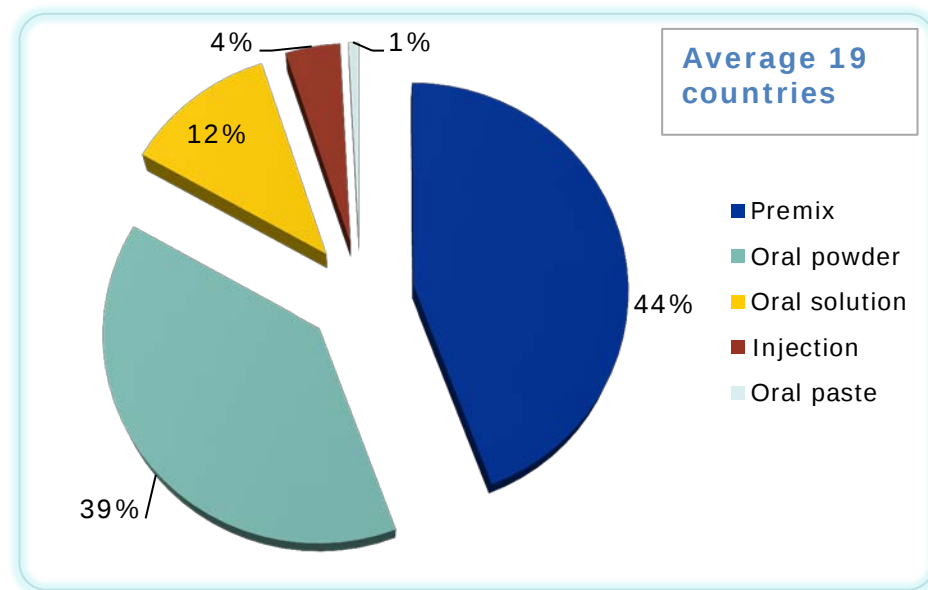
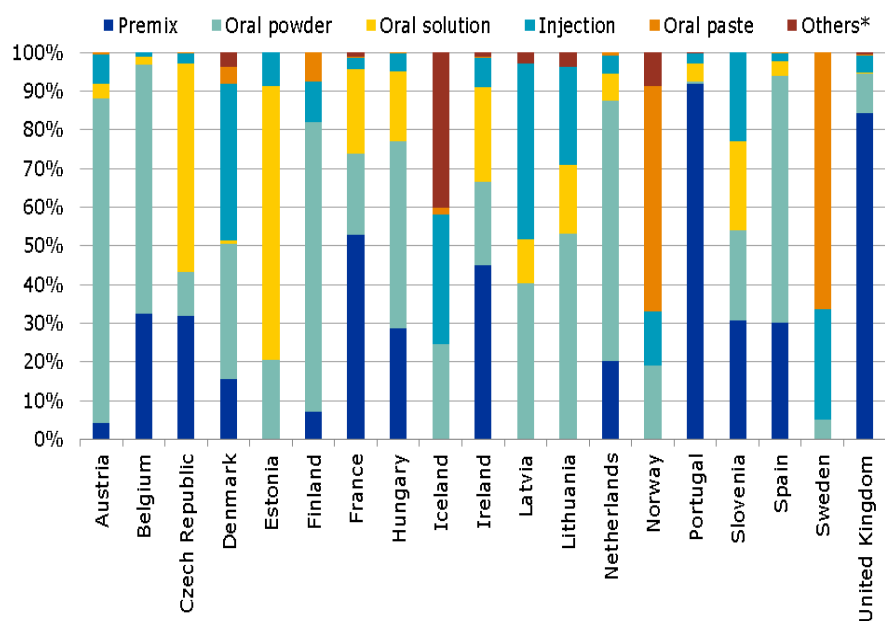


Distribution of sales by pharmaceutical form for penicillins, in tonnes of active ingredient, by country, for 2010





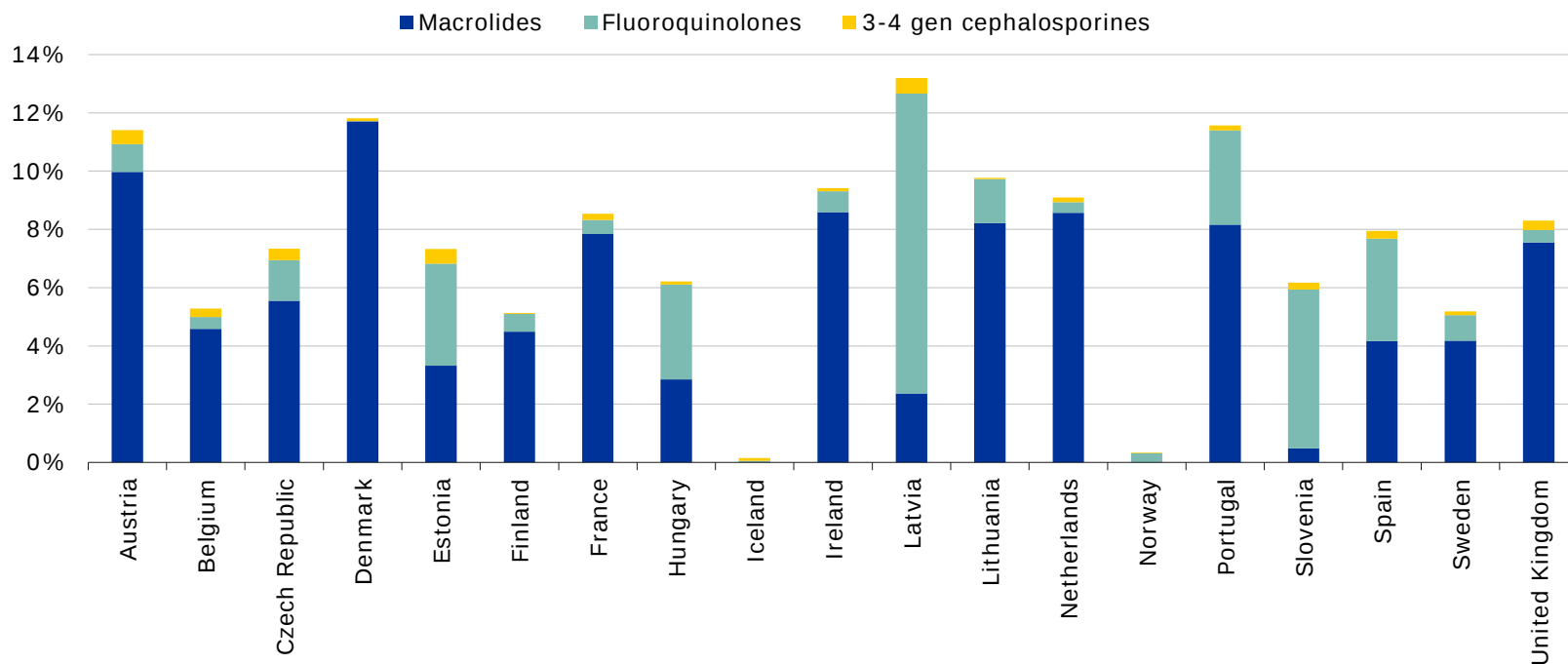
Distribution of sales by pharmaceutical form for sulfonamides, in tonnes of active ingredient, by country, for 2010





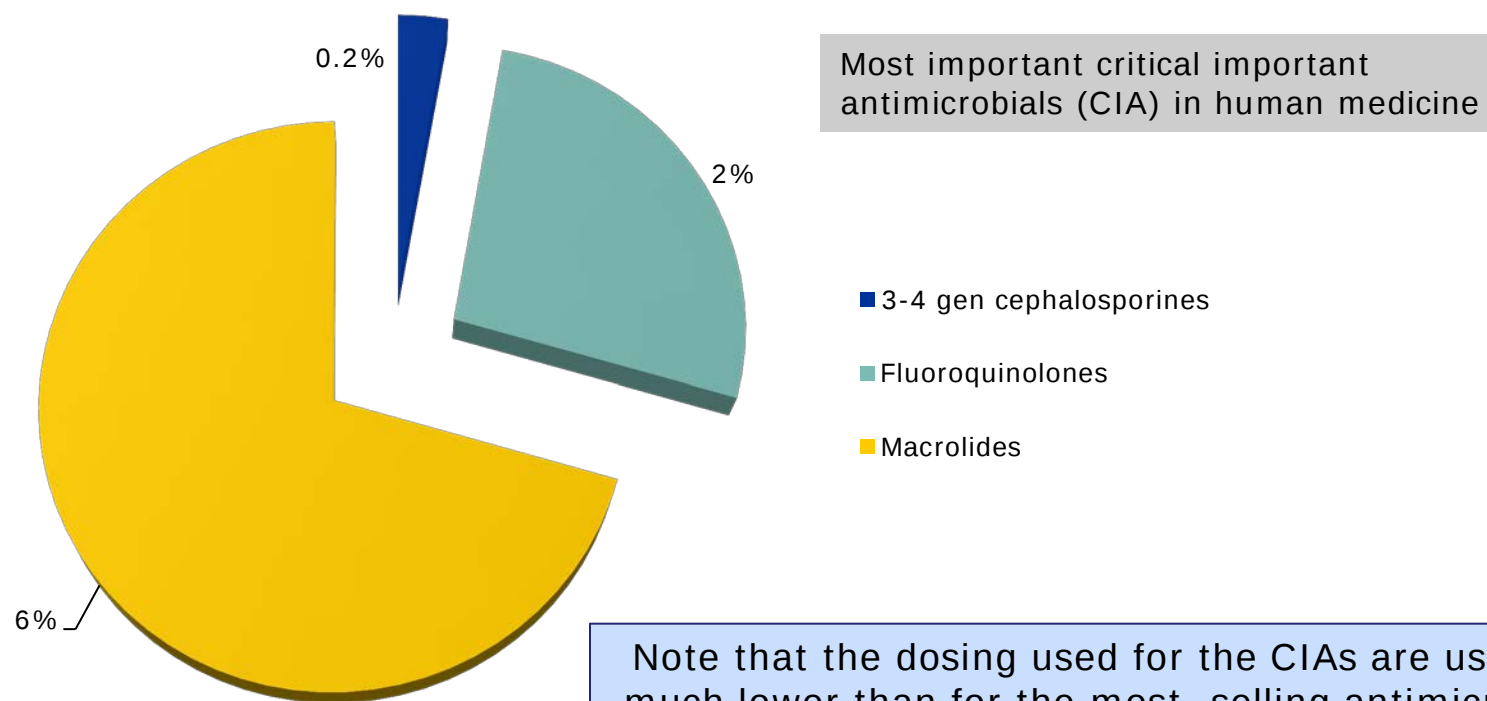
Results cont.

Sales of macrolides, fluoroquinolones and 3rd- and 4th-generation cephalosporins, in % of total sales, for food-producing species, including horses, in mg/PCU, by country, for 2010





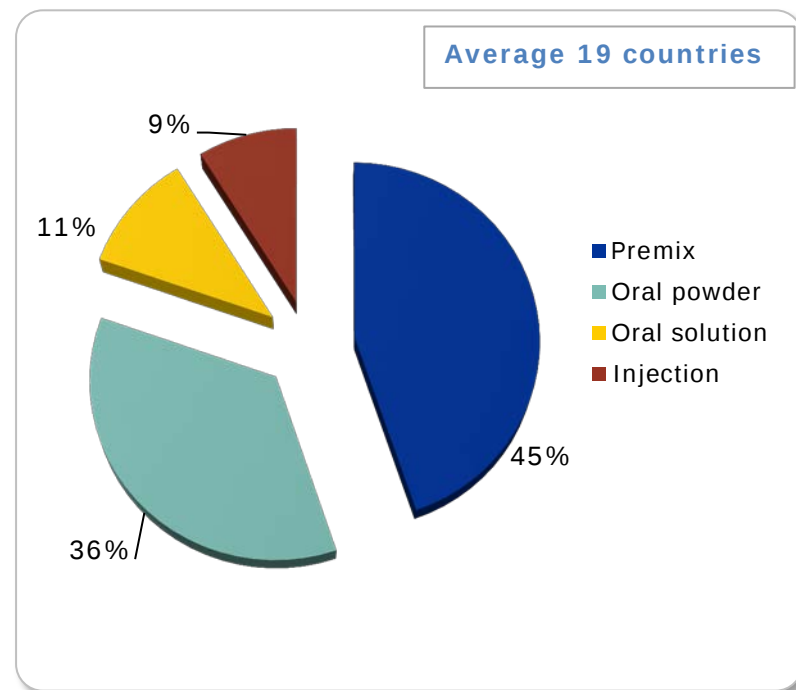
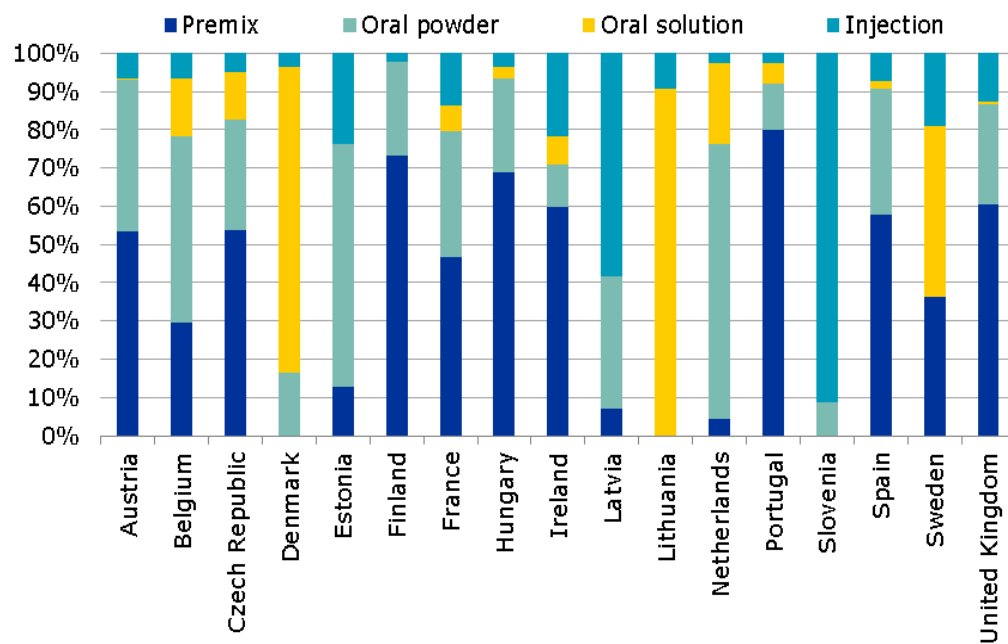
Percentage of sales of the most important CIAs, in mg/PCU, of total sales aggregated by 19 countries in 2010



Note that the dosing used for the CIAs are usually much lower than for the most- selling antimicrobial agents: tetracyclines, penicillins and sulfonamides

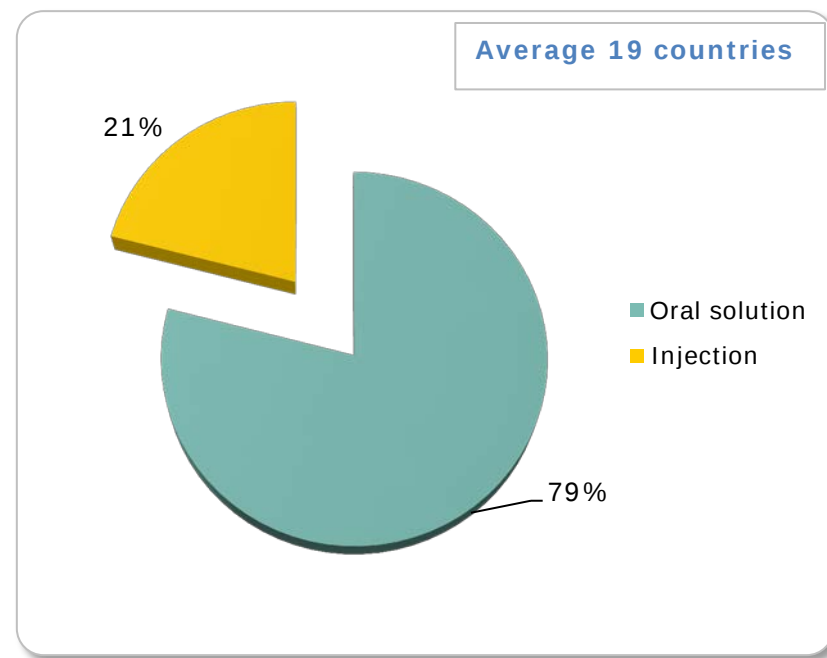
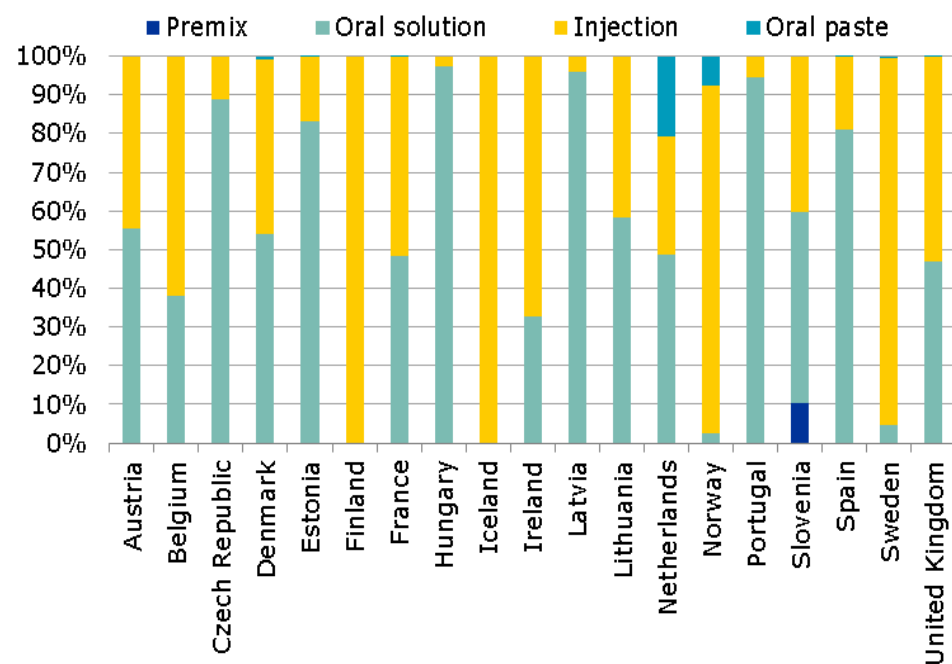


Distribution of sales by pharmaceutical form for macrolides, in tonnes of active ingredient, by country, for 2010



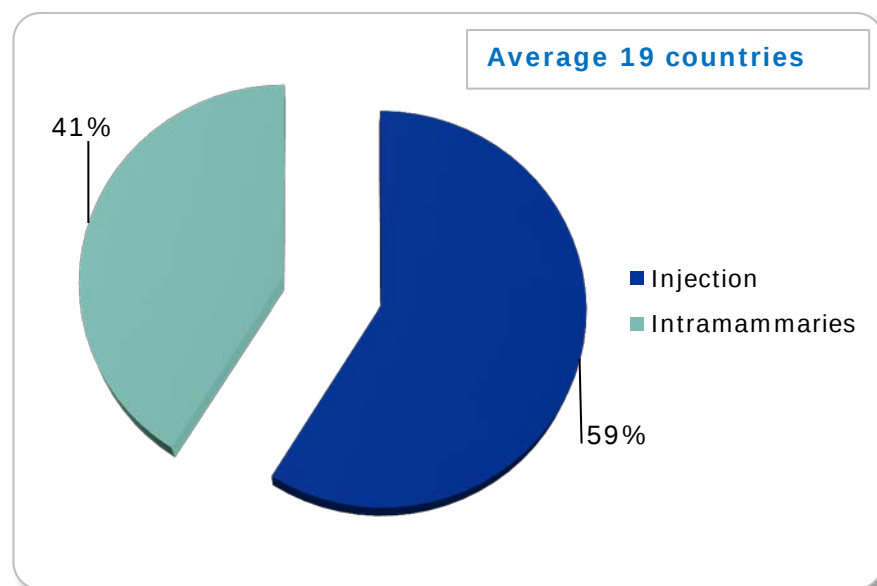
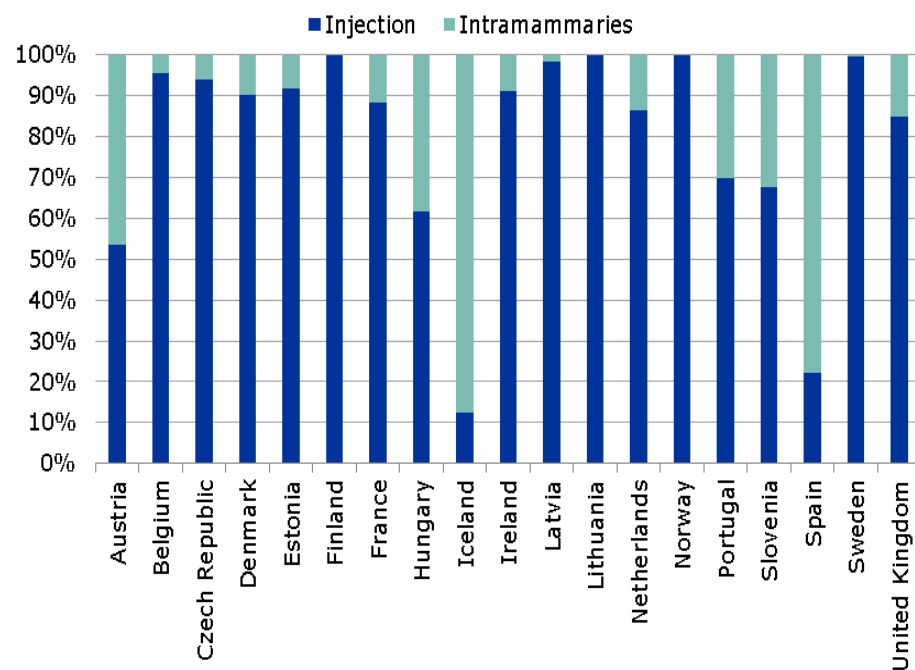


Distribution of sales by pharmaceutical form for fluoroquinolones, in tonnes of active ingredient, by country, for 2010





Distribution of sales by pharmaceutical form for 3rd- and 4th-generation cephalosporins, in tonnes of active ingredient, by country, for 2010





Summary

- The major part of the sales of veterinary antimicrobial agents in the 19 countries is for herd treatment but considerable variations between countries
- The prescribing patterns of the various antimicrobial classes, expressed as mg/PCU, varied substantially between the countries.



Summary cont.

- Of total sales tetracyclines, penicillins and sulfonamides are the most-selling veterinary antimicrobial agents, both by country (range 61-81%) and overall (73%) in the 19 countries
- Overall in the 19 countries the sales, in mg/PCU of the most CIAs account for 8% of total sales
- The percentage of sales of the most important CIAs varies considerably between countries (range 0.2%-12%)



Summary cont.

- A many-fold difference in the sales, expressed as mg/PCU, is observed between the most- and least-selling countries.
- This is in part likely to be due to
 - differences in the composition of the animal population in the various countries
 - variation in terms of dosage used, length of treatment period or formulation of the various antimicrobial agents used;
- However, these factors can only partly explain the differences; other factors also need to be considered.



Use of the ESVAC 2010 data

- EC review of medicated feed legislation
- CVMP prioritisation of referrals for antimicrobials
- CVMP Antimicrobials Working Party reflection papers on various classes of antimicrobials
- World Economic Forum, Davos 2013
<http://reports.weforum.org/global-risks-2013/risk-case-1/the-dangers-of-hubris-on-human-health/#read>
- Requests from universities



Acknowledgements

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