

Farm antibiotic use in Spain

Levels of farm antibiotic use in Spain

Data on the sales of farm antibiotics are only available for Spain for 2010 to 2014. The sales data are published annually by the European Medicines Agency as part of the European Surveillance of Veterinary Antimicrobial Consumption (ESVAC) project.

The EMA reports show that farm antibiotic use in Spain is exceptionally high. See Table 1.

Table 1 Active ingredient of antibiotics sold for use in veterinary medicine in Spain (tonnes) 1999-2014 [1][2][3][4][5][6]

2010	2011	2012	2013	2014
1,746	2,391	2,116	2,202	2,964

Note that Spain changed its system for collecting sales data in 2014, and some of the products most commonly sold in 2014 had not been reported in 2011–2013, despite being marketed during this period. Therefore, therefore it is believed that the sales data for Spain for 2011 to 2013 represent substantial underestimates.

Furthermore, it is known that the figure for 2010 is a large underestimate because one pharmaceutical company did not report its sales for that year. The company accounted for 21% of total sales in 2011, so actual sales in 2010 are likely to have been well above 2,000 tonnes.

Note also that the data for 2011 and 2012 are not the same as that published in the EMA annual reports. We have sought clarification from the EMA, because of apparent contradictions in the reports regarding Spanish data, and they have provided these totals as the correct totals. The correct total can also be read from the EMA interactive database [6].

Extremely high levels of the fluoroquinolone antibiotics, which are classified as critically important in human medicine, are used in Spanish farming. The critically important 3rd and 4th generation cephalosporins are also used, but in much smaller quantities. Farm use of the antibiotic colistin, which is now a last-resort antibiotic in human medicine, is extremely high in Spanish farming. In 2014, 255 tonnes of colistin was used in Spanish farm animals, which is about 250 times more than all of the colistin used in human medicine in the European Union [7].

Data from the European Medicines Agency shows that 96% of farm antibiotic use in Spain is for mass medication, in animal feed or drinking water, with about 4% being used for individual treatments [1].

Comparison with other EU countries

The most recent ESVAC statistics for all EU countries are for 2014, and in 2014 farm antibiotic use in Spain was the highest out of the 29 countries reporting data. Sales are calculated in terms of weight of active ingredient per unit of livestock (the EU unit of livestock is called a “Population Correction Unit” or PCU), and sales in Spain were 418.8 mg/PCU, whereas the average for 29 European countries (EU/EEA) was 152 mg/PCU.

Use in Spain is many times higher than in the Nordic countries (in Norway it is 3.1mg/PCU, in Iceland 5.2 mg/PCU, in Sweden 11.5 mg/PCU, in Finland 22.3 mg/PCU and in Denmark 44.2 mg/PCU) [1].

Furthermore, with the exception of Denmark, in all of these Nordic countries most farm antibiotics are used for individual treatments.

Use of the critically important fluoroquinolones and of colistin are much higher in Spain than the European average, although use of the 3rd and 4th generation cephalosporins is closer to the European average.

Care must be taken when comparing internationally, as antibiotic use is different in different species. Usually, intensively farmed species like pigs, poultry and veal calves (when they are intensively farmed) have very high antibiotic use, whereas extensively farmed sheep and cattle raised on pasture tend to have much lower antibiotic use. So countries with different proportions of different species can be expected to have different use levels. Spain has a high proportion of pigs (49% of its total PCU compared with an EU average of 33%), and since pigs are particularly high consumers of antibiotics, this partly explains the high level of consumption. This is not the main reason, however, since Denmark has proportionally more pigs (over 70% of PCU), yet Danish farm antibiotic use is about 9 times lower per PCU than Spain.

Regulatory situation in Spain

Since 2006, in Spain, as in the rest of the European Union, antibiotics cannot be used for growth promotion and a veterinary prescription is always required.

However, under EU law, antibiotics can still be used for routine disease prevention. This means, for example, that it remains legal for a prescription to be written for mass medication of animals (usually pigs or poultry) via feed or drinking water, even in situations when no disease has been diagnosed in any of the animals.

Routine preventative use is no longer practiced in the Nordic countries and the Netherlands, which is why these countries have lower levels of antibiotic use than in Spain and most of Europe.

In Spain, there are no specific regulations aiming to limit farm antibiotic use to appropriate use. There is no ban on routine disease prevention, nor are there regulations aiming to limit the use of the critically important antibiotics [8].

National Action Plan

A Spanish Strategic Action Plan to reduce the risk of selection and dissemination of antibiotic resistance was adopted in 2014 by the Interterritorial Council of the National Health System and the Ministry of Agriculture, Food and Environment [9]. The plan was published in response to an EU requirement for Member States to produce an action plan and focuses on both human and veterinary medicine.

What still needs to be done

In order to put an end to the widespread overuse of antibiotics in Spanish livestock farming, routine preventative treatments need to be banned. The European Parliament has voted to ban routine preventative use of farm antibiotics, but this needs to be accepted by the Council of Ministers in the upcoming trilogue on Veterinary Medicines Products Regulations. Spain needs to support the European Parliament's position and implement a ban without further delay.

There is also a need to implement specific restrictions on the use of the critically important antibiotics. These should only be permitted for the treatment of individual sick animals (no prophylaxis, no group treatments), and only in situations where sensitivity testing has shown that

alternative antibiotics would be unlikely to work. An outright ban on the use of the last-resort antibiotic colistin is also needed.

Measures need to be introduced to improve animal health and welfare, in order to make larger reductions in farm antibiotic use than have already been achieved. Less intensive farming systems, which promote animal health and welfare need to be encouraged. Intensively farmed pigs and poultry have particularly high levels of antibiotic use, as do veal calves when farmed intensively.

In pig farming, for example, there is evidence that the early weaning of piglets leads to much higher levels of antibiotic use as diarrhoea is more likely. A study comparing weaning practices and antibiotic use in Sweden, Belgium, France and Germany found that median antibiotic use in weaner piglets was over 100 times lower in Sweden than in the other three countries [10][11]. In Sweden, the media weaning age was 35 days, whereas in the other three countries it was between 22 and 25 days.

In most EU countries, piglets can be weaned as early as 21 days. Council directive 2008/120/EC mentions an official weaning age of 28 days, but allows weaning at 21 days when certain minimal requirements are met. In contrast, in Sweden weaning is not legally permitted before 28 days. Spanish animal-health and welfare laws need to ensure a later weaning age.

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