Farm antibiotic use in Belgium

Levels of farm antibiotic use in Belgium
Belgium has been collecting data on farm antibiotic sales since 2007. The data records all antibiotics sales to veterinarians and to veterinary pharmacies.

As Table 1 shows, there have been significant reductions in overall farm antibiotic use since 2007, although reductions in recent years have been minor.

Table 1  Active ingredient of antibiotics sold for use in veterinary medicine in Belgium (tonnes) 2007-2015 [1]

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<td>2007</td>
<td>348.8</td>
<td>298.9</td>
<td>304.2</td>
<td>299.3</td>
<td>299.1</td>
<td>277.9</td>
<td>259.4</td>
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No Belgian data is available on antibiotic use in different species as many antibiotic products sold to veterinarians and pharmacies can be used in different species. In order to get data on species use and actual usage data, a new online tool for collecting this data has developed and launched by the “Agence Fédérale des Médicaments et des Produits de Santé” [2]. During 2016 veterinarians prescribing for pig, poultry and veal-calf farmers will be required to submit data. Submitting data for use in cattle will be voluntary.

Despite the lack of reliable data on use in different species, an attempt was made to extrapolate data collected in surveys of antibiotic use in pigs, poultry and veal calves to the entire country. This extrapolation suggested that more than half of Belgian farm antibiotic use is in pigs [3].

Data from the European Medicines Agency shows that over 91% of Belgian farm antibiotic use is for mass medication, in animal feed or drinking water, with less than 10% of use being for individual treatments [4].

Comparison with other EU countries
The most recent statistics for all EU countries are for 2014, and in 2014 farm antibiotic use in Belgium was slightly above the EU average. 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 use in Belgium was 158.3 mg/PCU, whereas the average for 29 European countries (EU/EEA) was 152 mg/PCU.

Use in Belgium remains much higher than in the Nordic countries (Norway 3.1 mg/PCU, Iceland 5.2 mg/PCU, Sweden 11.5 mg/PCU, Finland 22.3 mg/PCU, Denmark 44.2 mg/PCU) [4]. With the exception of Denmark, in all of these Nordic countries most farm antibiotics are used for individual treatments.

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. High-consuming pigs represent a greater proportion of Belgian livestock (55% of total PCU) than the European average (33%), so it is not surprising that total use in Belgium is above average [4].
A recent survey of the Belgian, French, German and Swedish pig industries did find that antibiotic use in Belgian pigs was much higher than in Sweden. The median number of treatments in Belgium per 1,000 pig days was 7.5 times higher than in Sweden, slightly higher than in France, and over 40% lower than in Germany [5].

**Regulatory situation in Belgium**

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

However, most European countries, including Belgium, still permit antibiotics to 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 Belgium and most of Europe.

**National action plan and other national actions against the overuse of farm antibiotics**

A Center of expertise on Antimicrobial Consumption and Resistance in Animals (AMCRA) ([http://www.amcra.be/fr](http://www.amcra.be/fr)) was established in 2012 which gathers data on farm antibiotic use and resistance, and develops guidelines for prudent farm antibiotic use in different sectors. AMCRA is financed by Federal agencies, as well as industry bodies (pharmaceutical industry, farming bodies, veterinary bodies and feed manufactures).

AMCRA has produced an “AMCRA 2020 Vision Statement” which includes targets: a reduction in overall farm antibiotic use of 50% by 2020 and a reduction of 75% in the antibiotics classified as “critically important in human medicine” [6]. The reference year for these targets is 2011. The plan also aims to put an end to prophylaxis (preventative use of antibiotics). A convenant was recently adopted between the Belgian government and industry bodies which committed to achieving the targeted reductions.

All AMCRA initiatives, which were partly inspired by earlier successful initiatives in the Netherlands, are voluntary and there has been little talk of regulation. As a result, progress has been slow with reductions of just 13% between 2011 and 2015, and no reduction since 2013. The sales data report for 2014 said that the increased use was “very disappointing” and said there may be a need for “more stringent measures to force all stakeholders involved towards a reduction in use” [7]. However, even though in 2015 the reduction was just 2.8% this was welcomed as “promising” even though annual reductions of 10% are now needed if the 2020 target is to be met1.

**What still needs to be done**

Routine preventative treatments need to be ended. AMCRA has recommended that, with the exception of dry-cow therapy, no antibiotics should be licensed for preventative treatments. However, removing such indications from the label of antibiotic products would not necessarily put an end to preventative treatments as some, legal, “off-label” preventative treatments might still be permitted. Furthermore, the fact that farm antibiotic use in Belgium is so much higher than

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1 Note that many of the percentage calculations in the latest sales report (Belvet-SAC report for 2015) are incorrect. The report says annual reductions of 7% are now needed, when the correct percentage is 10%. Similarly, the calculations of the reductions achieved so far are incorrect.
countries that do not permit routine preventative use (the five Nordic countries and the Netherlands) suggests that at present preventative use remains widespread.

Preventative group treatments are particularly common in the pig industry: a 2012 study found that 93% of group treatments on Belgian fattening pig farms were purely preventative, and no disease had been diagnosed in any of the animals. In just 7% of cases a veterinarian had diagnosed an actual disease outbreak before prescribing the group treatment [8].

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. Belgium needs to support the European Parliament’s position and implement a ban without further delay.

Instead of just setting targets for reducing the use of the “critically important” antibiotics, restrictions on when these antibiotics can be used need to be implemented, as occurred recently in France. Critically important antibiotics should only be used to treat individual sick animals, and only in cases where sensitivity testing, or treatment history, suggests other available antibiotics are unlikely to work. Belgium also needs to completely ban the use of the antibiotic colistin, which is now a last-resort antibiotic in human medicine for certain life-threatening infections, but is still widely used in Belgian farming.

Less intensive farming systems, which promote animal health and welfare need to be encouraged. Intensively farmed veal calves, pigs and poultry all have high levels of antibiotic use in Belgium. A recent Belgian study found that antibiotic use in intensively farmed veal calves was over 25 times higher than in more extensively raised beef cattle, and levels of antibiotic resistance in the veal calves was also much higher [9].

Evidence of how less intensive farming practices, focused on animal health, can reduce antibiotic is provided by a recent study of the Belgian, French, German and Swedish pig industries [10][11]. It found that the median number of antibiotic treatments was over 7 times higher in Belgium than in Sweden (the number of treatments in Germany was even higher, but in France it was slightly lower than in Belgium). A major reason for the lower use in Sweden appears to be later weaning of piglets, which is likely to lead to fewer problems with post-weaning diarrhoea. In Sweden, the median age of weaning was found to be 35 days, whereas in Belgium, France and Germany it was between 22 and 25 days. In France, Belgium and Germany, antibiotic use in weaners was extremely high and accounted for most use throughout the pigs’ lives. In contrast, median antibiotic use in Swedish weaners was over 100 times lower.

Pig farmers in Belgium, and most EU countries, can wean 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. Belgian animal-health and welfare laws should be amended to ensure a later weaning age.

References


