ALLIANCE TO SAVE OUR ANTIBIOTICS

Farm antibiotic use in the United States

A threat to UK standards?

May 2020

Contents

1. Summary

The UK is a net importer of most meat and dairy products and at present the overwhelming majority of these come from the European Union. However, the UK's decision to leave the EU could have major implications for this trade. New international trade policies may lead to significant increases in imports from outside of the EU.

It is therefore important to understand how non-EU meat and dairy is produced and whether or not they meet the same health, safety and animal-welfare standards which are currently required in UK or EU production.

One country from which increased imports may occur is the United States. If there is no deal with the EU once the UK leaves the European Customs Union, the government is planning large cuts to tariffs on the importation of meat from countries, like the US, with which it does not yet have a free-trade deal covering agricultural goods, which will make many imports more economic. In the case of a no-deal Brexit, tariffs on pig meat will be cut by 87% and those on beef and poultry will also be cut by 47% and 40% respectively. Furthermore, the government may choose to lift current EU bans on the importation of beef from hormone treated cattle, of chlorine-washed chicken meat, of pig meat from animals treated with the growth-promoting chemical ractopamine and of dairy products produced from cows injected with the synthetic recombinant bovine growth hormone. Such measures could result in a large increase in imports of meat and dairy from the US.

This briefing therefore looks at the extent of farm antibiotic use in the United States compared with the use levels in the United Kingdom and the European Union. We use data published by the US Food and Drug Administration, the UK's Veterinary Medicines Directorate and the European Medicines Authority.

Both the UK and the US produce estimates of antibiotic use by farm-animal species. In order to make the data comparable, we have taken into account the size of the different livestock populations, and have used the European Medicine Agency's "Population Correction Unit" (PCU) as the livestock unit to do this.

Our findings show that in terms of mg of active ingredient of antibiotic use per tonne of livestock unit (PCU):

- total antibiotic use in US farm animals is more than 5 times higher than in UK farm animals
- antibiotic use in US cattle use is about 8–9 times as high as use in UK cattle
- antibiotic use in US pigs is more than twice as high as use in UK pigs
- antibiotic use in US chickens is more than twice as high as use in UK chickens
- antibiotic use in US turkeys is about 9 times as high as use in UK turkeys.

In most European countries, antibiotic use is higher than in the UK but lower than in the US:

- US farm antibiotic use is 2.6 times higher than the median use in European countries and 60% higher than the average use throughout Europe.
- out of 30 European countries, only 5 had higher farm antibiotic use than the United States. Countries with higher farm antibiotic use per livestock unit than the US include Spain and Italy.

Antibiotics have not been licensed as growth promoters in the US since 1 January 2017, having been phased out between 2014 and 2016. As a result of this action, US farm antibiotic use fell by 40% between 2013 and 2017. However, the latest data for 2018 shows a 9% increase in use compared

with a year earlier. This suggests that routine preventative antibiotic use, which remains legal, may now be increasing in the US.

In contrast, in the EU using antibiotics as growth promoters has been illegal since 1 January 2006 and new legislation which comes into force on 28 January 2022 will ban all routine antibiotic use, including all purely preventative group treatments. Knowledge that this ban is coming is already contributing to reductions in European farm antibiotic use, which has fallen by 32.5% between 2011 and 2017.

The US government has expressed very strong opposition to the forthcoming EU ban on the preventative use of antibiotics for treating groups of animals, with a top trade official calling it “a thinly veiled reason to create a trade barrier”. The United States Department of Agriculture has similarly attacked a World Health Organization proposal to end preventative group treatments in livestock as “not supported by sound science”.

The British government has still not committed to implementing a ban on preventative antibiotic group treatments of livestock, saying instead that it will consult with interested stakeholders on the issue.

2. UK farm antibiotic use is falling but large amounts of meat and dairy are imported

British farm antibiotic use has been cut by 50% between 2014 and 2018 [1]. The reduction can be mainly attributed to voluntary action by farmers. In particular, the poultry industry has ended preventative antibiotic use, and the pig industry has also cut its use which has traditionally been very high.

It is likely that improvements in antibiotic-use data collection, greater media attention, growing public pressure, shifts in position from some industry organisations, new supermarket antibiotic policies and the expectation of tighter regulation have all played a part in motivating the reductions.

The reductions in UK farm antibiotic use already appear to be contributing to reductions in antibiotic resistance in certain bacteria from British pigs and poultry [1]. This is clearly good news for human health in view of the growing scientific evidence that antibiotic-resistant bacteria can transfer from farm animals to humans and contribute to the resistance problem in human medicine [2][3].

However, UK production currently only provides about 38% of all British consumption of pig meat, 59% of poultry meat and 63% of beef, so the problem of antibiotic-resistant bacteria on imported produce also needs to be addressed [4][5][6].

At present the overwhelming majority of UK meat and dairy imports come from the European Union, partly because of an absence of tariffs and regulatory barriers on trade between the UK and the EU. Data published by the Agriculture and Horticulture Development Board (AHDB) show that the proportion of imports coming from the EU is over 99% for pig meat, nearly 99% for dairy products, 95% for poultry meat and 86% for beef, although the EU provides just 10% of imported lamb [7].

Some of the largest exporters to the UK include countries using relatively low levels of antibiotics. For example, Denmark and the Netherlands produce 44% of the UK's imports of pig meat, and antibiotic use per pig in both of these countries is less than half of the level used in the British pig industry. On the other hand, Germany produces 20% of the pig meat imported into the UK, and is generally a higher user of antibiotics in livestock than the UK. Also, smaller amounts of pig meat are imported from Spain and Italy [4] where farm antibiotic use is extremely high.

3. Why the importation of meat from the US could increase

British membership of the EU Customs Union and Single Market has ensured that there are no tariffs on imported produce from the rest of the EU. On the other hand, unless a free-trade deal is in place, imports from countries outside the EU may be uneconomic because of the imposition of tariffs. Non-EU imports can also be limited if production does not meet UK and EU regulatory standards.

However, the government has announced plans for major cuts to tariffs imposed on imported meat to apply if there is a no-deal Brexit. Tariffs on pig meat will be cut by 87% and those on beef and poultry will also be cut, by 47% and 40% respectively [8], making imports from many countries such as the US much more economic.[1] Furthermore, unless a free-trade deal between the UK and the EU is agreed, there is also the possibility of tariffs being imposed on imports from the EU which would make non-EU imports even more price competitive.

It has also been reported by the Financial Times that the government is preparing a "big concession package" on tariffs for US agricultural produce to help unlock a trade deal with the US [9].

US exports into the EU and the UK are also currently limited by certain EU regulations, which are currently still in place in the UK, that large parts of US production does not meet. In particular:

- the EU does not permit the production or importation of beef produced with hormone growth-promoters, but most US beef is produced in this way.
- 60–80% of US pigs are fed the growth-promoting chemical ractopamine, which is banned in the EU and 160 countries worldwide [10]. The production and importation of meat from pigs fed ractopamine is also banned in the EU.
- chlorine-washed chicken meat cannot be imported into the EU, although this treatment is standard in the US chicken-meat industry.
- dairy cows in the United States are sometimes treated with recombinant bovine growth hormone (rBGH) a genetically modified growth hormone which helps boost milk production, although such use has decreased in recent years and most US dairy producers no longer use the drug. The use of rBGH in dairy cows has been banned in the EU since 1990 and the importation of dairy products produced from cows treated with rBGH is also banned. According to an EU report [11], the use of rBGH is associated with poor welfare, and with increased incidence of "serious mastitis, foot disorders and some reproductive problems". The report points out that many of these problems are then treated with antibiotics.

The desire to strike a trade deal with the US could result in some or all of these restrictions being lifted. The British government has said it does not plan to lower UK food and animal-welfare standards, and the Conservative Party's election manifesto says "in all of our trade negotiations, we will not compromise on our high environmental protection, animal welfare and food standards" [12]. However, it has still not yet made clear whether or not any of these EU bans on the importation of animal products produced with these methods will remain in place.

Furthermore, the government and MPs rejected an amendment to the Agriculture Bill, currently making its way through Parliament, which would have prevented the ratification of a trade agreement allowing the importation of agricultural or food products which have not been produced to environmental and animal-welfare standards that were equivalent to British standards [13].

[1] Update: on 19 May the government announced its latest plans for tariffs, which will maintain the same tariff level as the EU tariff level on imported meat, for countries with which the UK does not have a trade deal. The possibility still remains that tariffs on meat imported from the US will be cut if there is a free-trade deal agreed.

In contrast, the US government and livestock farming organisations have been very clear that they want the UK to align with US and basic international standards. In an interview with BBC Radio 4's Farming Today programme, broadcast on 12 May 2020, the American Secretary for Agriculture, Sonny Perdue, argued against restricting food imports because of concerns regarding animal welfare, saying that such an issue should be left to the market [14]. He said that UK farmers should be "unshackled" so that they could compete on a "level playing field" with US farmers. He continued saying "I think that is what you have the opportunity to do in the United Kingdom now, with Brexit, I think you have an opportunity to row your own boat in the way that's international standards. I believe the EU has held the UK back and that's the reason your citizens voted to leave, and I think now is the opportunity to take advantage of some of the freedoms your citizens have in order to enjoy Brexit."

US livestock-industry trade organisations and lobbyists have also been calling on the US government to insist in trade talks that the UK adopt US standards. In response to a call from the US Department of Trade for comments on a proposed US/UK trade deal, organisations such as the National Pork Producers Council, the National Cattlemen's Beef Association, the National Milk Producers Federation, the US Meat Export Federation and the International Dairy Foods Association all called for the removal of non-tariff barriers to trade such as the EU bans mentioned above [15].

The lowering of tariffs combined with the possibility of certain regulatory barriers being lifted could lead to a significant increase in imports of meat and dairy from the US, where production costs are often significantly lower than in the UK and in other European countries. British and EU production costs for pig meat are approximately 45% higher than in the US [4]. US beef production costs are similarly much lower than those of the UK beef industry or the Irish beef industry (Ireland currently provides 63% of UK beef imports) [6].

4. US farm antibiotic use by animal species

The US Food and Drug Administration (FDA) publishes data on the sales of antibiotics for use in livestock. As many of these antibiotic products are licensed for use in more than one animal species, sales data does not generally provide precise information on use by species. However, in recent years pharmaceutical companies have been required to provide the FDA with estimates of usage of the products by species and an overall estimate of species usage is published annually in FDA reports.

In December 2019, the US FDA published sales data for farm antibiotics for 2018 [16]. As shown in Table 1, the highest overall use in terms of weight of active ingredient was in cattle, followed by pigs.

Table 1 US sales of medically important antibiotics by farm-animal species (FDA estimate) in weight of active ingredient (kg) in 2018

Cattle	2,521,157
Pigs	2,374,348
Chickens	221,774
Turkeys	671,108
Other	247,753
Total	**6,036,140**

In 2018, US sales of farm antibiotics was 9% higher than in 2017 although there was still a 38% reduction in use compared with 2015. The fall in antibiotic use is very probably due to the FDA's decision to phase out the use of antibiotics for growth promotion between 2014 and 2016. However, the resumption of increasing use in 2018 may be due to an increase in routine preventative antibiotic use, which remains legal in the US, see Table 2.

Table 2 US farm antibiotic sales 2009 to 2018, in tonnes of active ingredient [16]

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
7,687	8,229	8,256	8,897	9,193	9,479	9,702	8,356	5,559	6,036

In order to make the data comparable with UK and EU data, we need to take into account the size of the different livestock populations. The EU and the UK publish data on the size of their livestock populations using the European Medicine Agency's (EMA) "Population Correction Unit" (PCU) as the livestock unit. Unfortunately, the FDA does not provide data on its livestock populations using the PCU. So, we have calculated the PCU for each species in the US using data on livestock numbers. The details of the calculation of the PCU for each species, and the antibiotic usage in mg of active ingredient per kg of PCU are set out below.

The "Population Correction Unit

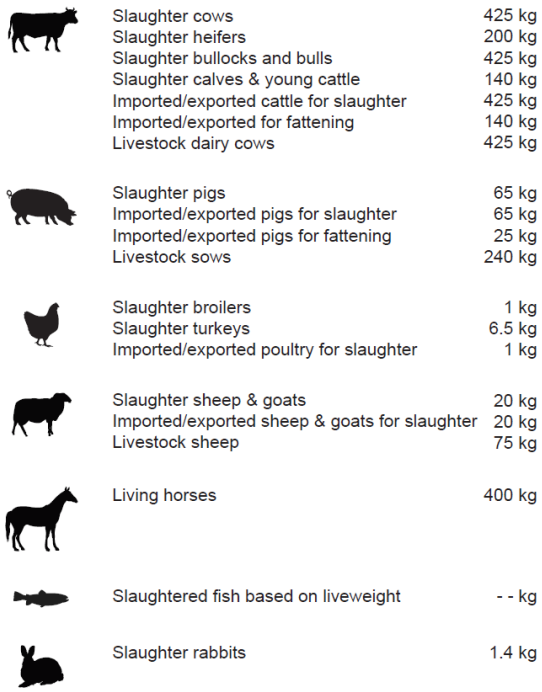
The EMA has introduced a unit to measure the size of livestock populations, called the "Population Correction Unit" (PCU), so that comparisons of antibiotic usage can be made between different countries.

As explained by the government's Veterinary Medicines Directorate (VMD): "The Population Correction Unit (PCU) is a theoretical unit of measurement developed by the European Medicines Agency (EMA) in 2009 and adopted across Europe. It takes into account a country's animal population over a year, along with the estimated weight of each particular species at the time of

treatment with antibiotics. Although it is an estimation it does enable year-on-year comparisons to be made and trends to be seen.

The PCU is a technical unit which estimates the average animal weights at time of treatment. The EMA takes into account that the majority of antibiotics are used in young animals. Therefore, the weight used is likely to be below final weight at slaughter" [17]

The PCU weights are given below (this image is taken from a VMD document) [17]:



Slaughter cows	425 kg
Slaughter heifers	200 kg
Slaughter bullocks and bulls	425 kg
Slaughter calves & young cattle	140 kg
Imported/exported cattle for slaughter	425 kg
Imported/exported for fattening	140 kg
Livestock dairy cows	425 kg
Slaughter pigs	65 kg
Imported/exported pigs for slaughter	65 kg
Imported/exported pigs for fattening	25 kg
Livestock sows	240 kg
Slaughter broilers	1 kg
Slaughter turkeys	6.5 kg
Imported/exported poultry for slaughter	1 kg
Slaughter sheep & goats	20 kg
Imported/exported sheep & goats for slaughter	20 kg
Livestock sheep	75 kg
Living horses	400 kg
Slaughtered fish based on liveweight	- - kg
Slaughter rabbits	1.4 kg

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Adjustments need to be made to the PCU to take into account animals exported to, and imported from the country during the year in question. The PCU weight of imported animals get subtracted from the PCU total, and PCU weights of exported animals get added.

Information on US livestock numbers can be obtained from a US Department of Agriculture (USDA) document [18].

Calculations for antibiotic use in US pigs

According to the USDA [18], in 2018 there were 121.3902 million pigs slaughtered in the US and there were 6,179 thousand breeding animals. A large majority of the breeding animals will be sows, but a small minority will be boars, which do not have a PCU. If we assume that all of the breeding animals are sows, we will slightly overestimate PCU, since boars have a zero PCU. By slightly overestimating PCU, we will be slightly underestimating usage per PCU. This equates to an initial calculation of US pig PCU of:

65*121,390.2+240*6,179 = 7,689,695+1,461,696 = 9,373,323 thousand kg = 9,373 thousand tonnes.

During 2018, the US imported more live pigs (5,521,441) than it exported (35,641) [19], so our initial PCU calculation is an overestimate.

Adjusting the PCU to take into account imports and exports, and taking into account the ages of the traded animals, we estimate US pig PCU to be 9,207 thousand tonnes.

From this we derive an estimate of antibiotic use in US pigs of:

2,374,348/9,207 = 258 kg of antibiotic per thousand tonnes of PCU = 258 mg per kg of PCU.

Calculations for antibiotic use in US chickens

The PCU for a slaughtered broiler is 1 kg. So the PCU for broilers is equal to the number of broilers slaughtered, plus the number of broilers exported for slaughter minus the number of broilers imported for slaughter. This is equal to the number of home-produced broilers slaughtered plus the number of home-produced broilers exported for slaughter. This is by definition equal to the number of broilers produced by the US broiler industry.

According to the USDA [18], the number of broilers produce in 2018 was 8,913,000 thousand chickens, which equates to a US chicken PCU of 8,913 thousand tonnes.

From this we derive an estimate of antibiotic use in US chickens of: 221,774/8,913 = 25 mg/kg.

Calculations for antibiotic use in US cattle

We use USDA cattle population data for both beef and dairy cattle [18]. This data shows that in 2018 there were 9,399,600 dairy cows. This equates to an initial estimate for dairy-cow PCU of 3,995 thousand tonnes. We also calculate a beef-cattle PCU of 11,864 thousand tonnes. This results in an an initial cattle PCU estimate of 15,859 thousand tonnes.

Adjusting for the number of imported cattle and the lower number of exported cattle [20] we estimate US cattle PCU to be 15,627 thousand tonnes.

From this we derive an estimate of antibiotic use in US cattle of: 2,521,157/15,627 = 161 mg/kg.

Calculations for antibiotic use in US turkeys

In 2018, the total number of turkeys slaughtered in the US was 242,500 thousand. This equates to a PCU estimate of 1,576 thousand tonnes. From this we derive an estimate of antibiotic use in US turkeys of: 671,108/1,576 = 426 mg/kg.

Note that in 2018 the US imported four times as many turkeys as it exported [21]. We have not taken this into account in our calculation of the PCU as the data is not in a form which enables this to be done easily. However, since imports were larger than exports, this means that our PCU estimate is an overestimate, and therefore that our usage estimate is an underestimate. In other words, in 2018 US use of antibiotics in turkeys was at least 426 mg/kg.

Average US antibiotic use across all species

In order to calculate total US PCU, we first need to estimate US PCU for sheep/goats, horses and farmed fish. Based on USDA population data for sheep and goats [18], we calculate total US sheep/goat PCU to be 498 thousand tonnes. For horses, we calculate 1,448 thousand tonnes (based on 2012 population data [18]). For farmed fish, 2017 data from the National Marines Fisheries Service [22] allows us to calculate a fish PCU of 287 thousand tonnes.

We can then calculate total US PCU = 37,557 thousand tonnes.

From this we deduce a total antibiotic use level for the US in farm animals of:

6,036,140 /37,557 = 160.7 mg/kg.

5. US and UK antibiotic use compared

In the UK, the government's Veterinary Medicines Directorate (VMD) collects data on the sales of antibiotics which shows that total farm antibiotic use has fallen by about 50% between 2014 and 2018. According to the VMD, average UK antibiotic use across all farm-animal species is 29mg/kg [1].

VMD data is not broken down by species, however VMD sales-data reports do also publish data on antibiotic use by species produced by industry organisations such as the British Poultry Council and AHDB Pork. Estimates on use per PCU livestock unit are available for the pig and poultry industries derived from data covering most pig and poultry farms. Estimates based on surveys are also available for cattle and sheep.

British Poultry Council data, covering 90% of the UK poultry-meat industry, indicates that antibiotic use in poultry has fallen by about 80% since 2012, and use in chickens is now at around 12 mg/kg whereas use in turkeys is significantly higher at 47 mg/kg.

AHDB Pork data, covering 89% of the pig industry, shows that pig farmers have cut their antibiotic use by about 60% since 2015 to 110 mg/kg.[2] Despite the large cuts in use, antibiotic use in British pigs remains very high.

Antibiotic use in beef dairy and cattle is derived from surveys covering respectively 30% and 7.5% of the industries. The latest data shows that in dairy farming antibiotic use is 17 mg/kg, whereas in beef farming it is approximately 21 mg/kg.

Table 3 below provides the UK estimates on antibiotic use and compares them with the US use levels calculated above.

Table 3 Estimates of antibiotic use in different livestock species in the UK and the US, in terms of mg of active ingredient of antibiotic per kg of Population Correction Unit (mg/kg)

	United Kingdom	United States	US/UK ratio
Pigs	110	258	2.3
Chickens	12	25	2.1
Turkeys	47	426	9.1
Cattle	17-21	161	8–9
All food animals	29.5	160.7	5.4

Our findings show that in terms of mg of active ingredient of antibiotic per tonne of livestock unit (PCU):

- total antibiotic use in US farm animals is more than 5 times higher than in UK farm animals
- antibiotic use in US cattle use is about 8–9 times as high as use in UK cattle
- antibiotic use in US pigs is about twice as high as use in UK pigs
- antibiotic use in US chickens is about twice as high as use in UK chickens
- antibiotic use in US turkeys is about 9 times as high as use in UK turkeys.

[2] Both industry data and VMD data indicate that large cuts in UK farm antibiotic use have been achieved, although it appears that VMD data on total sales of antibiotics for use in pigs or poultry only is higher than indicated by industry data. The industry data, if representative of all UK pig and poultry farming, implies that total pig and poultry use should be about 117 tonnes of antibiotic active ingredient, whereas the VMD data suggests that total pig and poultry usage is at least 136 tonnes, and possibly higher.

The particularly large difference in antibiotic use in cattle between the two countries is likely to be at least in part due to the more industrial-type farming systems used in US cattle farming in comparison to the UK and raises concerns about the ways in which US beef is produced and the potential dangers it may pose to consumers. Antibiotic use in US pigs and turkeys is also at very high levels.

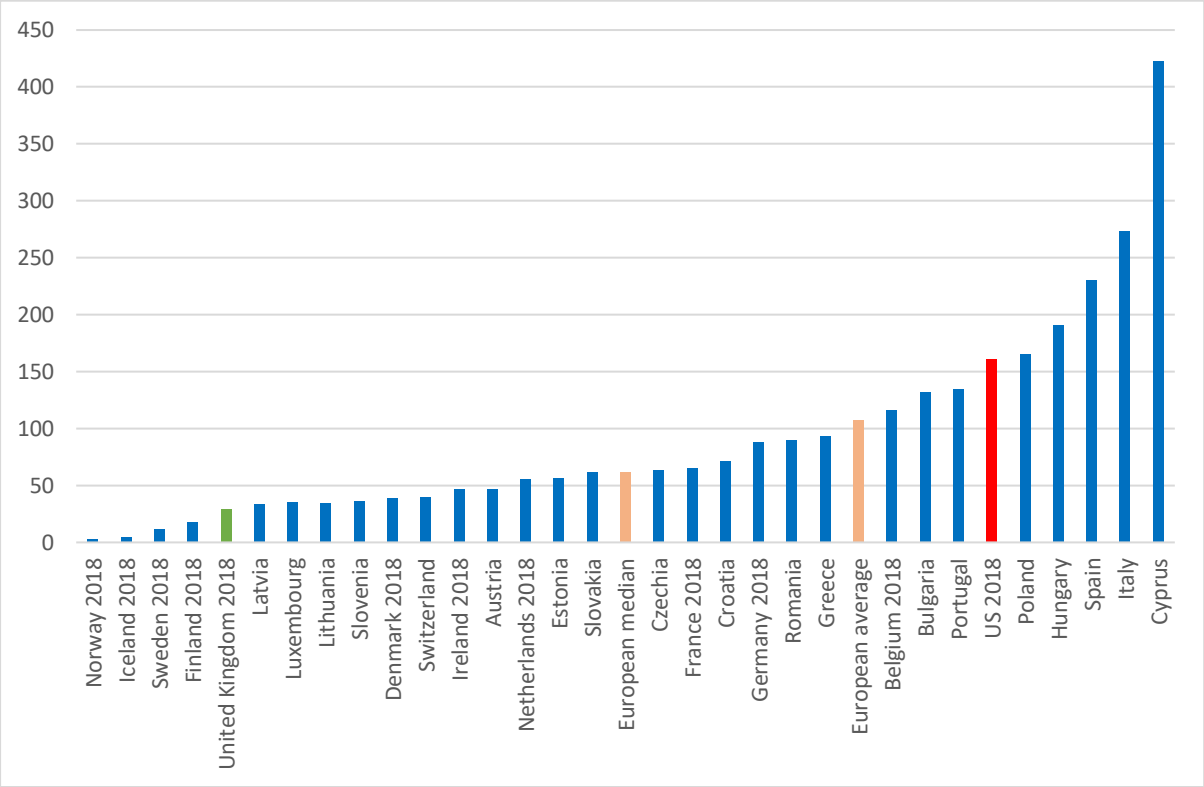
On the other hand, antibiotic use in the US chicken industry has been reduced very significantly in recent years, partly as a result of consumer groups campaigning on the issue. “Antibiotic-free” chicken has become mainstream following a series of “Chain Reaction” reports published by US advocacy groups [23]. It is also worth noting that the critically important fluoroquinolone antibiotics have been banned from use in all US poultry since 2005 due to strong evidence that such use is a major cause of fluoroquinolone-resistance in human Campylobacter food-poisoning infections. Fluoroquinolone use is still permitted in poultry production in the UK and most European countries, and as a result average fluoroquinolone resistance in human Campylobacter infections in Europe (59.3%) is much higher in than it is in the US (27.6%) [24][25].

One factor contributing to the fivefold difference in overall farm antibiotic use between the US and the UK is that the UK has many more sheep than the US, and sheep are generally low users of antibiotics. In the UK, sheep/goats make up about 40% of total PCU, whereas in the US they only make up 1% of total PCU. Nevertheless, as we have seen above, large differences also exist in each animal species.

6. US and EU antibiotic use compared

All EU countries are required to collect data on the sales of farm antibiotics and the results are published annually by the EMA [26]. The latest EMA report provides data for sales in 2017, however many European countries, including the UK, have already published their own reports giving 2018 data. In Graph 1 we compare total US farm antibiotic sales, per kg of PCU, with the sales in Europe. Where 2018 data is available it is used, but otherwise data is for 2017.

Graph 1 US and European farm antibiotic sales in mg of active ingredient per kg of PCU (2017 data unless indicated)



The data in Graph 1 shows that very large differences in antibiotic use exist between the lowest users in Europe (Norway 2.9 mg/kg, Iceland 4.6 mg/kg and Sweden 11.5 mg/kg) and the highest users (Cyprus 423 mg/kg, Italy 274 mg/kg and Spain 230 mg/kg).

In most European countries, antibiotic use is higher than in the UK (29 mg/kg) but lower than in the US (161 mg/kg). In particular:

- median European use is 62 mg/kg and average European use is 107 mg/kg[3], whereas use in the US is 161 mg/kg. So US farm antibiotic use is 2.6 times higher than the median use in European countries and 60% higher than the average use throughout Europe.
- out of 30 European countries, only 5 had higher farm antibiotic use than the United States. Countries with higher farm antibiotic use per livestock unit than the US are Cyprus, Italy, Spain, Hungary and Poland. Twenty five European countries have lower farm antibiotic use than the US.
- European farm antibiotic use fell by 15% between 2016 and 2017 (the last year for which there is data) whereas US farm antibiotic use increased by 9% between 2017 and 2018.

[3] The median is the value which lies at the midpoint such that half of European countries are above it and half below. The average is a weighted average taking into account the different sizes of livestock populations in different European countries.

Many of the current key exporters to the UK of pig meat (Denmark, Netherlands, Germany), beef (Ireland), dairy (Ireland, France) or poultry meat (Netherlands) use much lower levels of antibiotics in their livestock than the US [8], although much smaller quantities of meat are also imported from Spain, Italy and Poland where farm antibiotic use is even higher than in the US.

Overall, it appears clear that a significant increase in imports of meat or dairy products from the US will mean that UK consumers will be consuming livestock products produced with much higher overall levels of antibiotic use than current European imports.

7. EU will ban preventative group treatments in 2022 but US strongly supports preventative antibiotic use

Differences in antibiotic use between the EU and the US could continue to grow in coming years due to the different approaches the EU and the US are taking to the routine use of antibiotics and the excessive preventative use of antibiotics.

On 28 January 2022, new EU legislation will ban all routine farm antibiotic use, including all preventative treatments of groups of animals [27]. The phase out of group preventative antibiotic use in Europe is likely to lead to further falls in use, particularly in countries where such use is currently widespread.

The Netherlands began reducing preventative group treatments in 2009 and ended them in 2011, and this action and other policies have helped cut Dutch farm antibiotic use by 68% since 2007. Similarly the five Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) have already banned preventative group treatments and as a result have some of the lowest levels of farm antibiotic use in the world.

In contrast, the US strongly opposes attempts to end preventative group treatments. In 2017, the World Health Organization (WHO) produced new guidelines on farm antibiotic use which recommended that the use of antibiotics for group prevention be ended [3]. However, the US Department of Agriculture (USDA) condemned the guidelines claiming that they were "not supported by sound science" and saying that the FDA supported continued use of antibiotics for disease prevention [28].

The US's chief agricultural negotiator, Gregg Doud, has also strongly attacked the new EU legislation aimed at ending preventative group treatments and all routine use. Doud said that the rules were essentially a ban on using antibiotics and were a "thinly veiled reason to create a trade barrier" [29]. The Animal Health Institute (AHI), the US trade body representing pharmaceutical companies that produce veterinary medicines, has also strongly opposed the EU legislation and indicated that if the UK adopts the legislation this could cause problems in US/UK trade negotiations [15]. Like the AHI, the US National Pork Producers Council does not want to see the UK adopt the EU legislation [15]. These industry groups, and the US government, appear to believe that the EU legislation will ban the importation of meat produced from animals which have received preventative group treatments, but in reality the legislation only requires those exporting to the EU to avoid the use of antibiotic growth promoters as Article 118 of Regulation (EU) 2019/6 on veterinary medicinal products makes clear.

The UK government says that it does plan to implement most of the EU measures on farm antibiotic use which come into force in January 2022, but it has repeatedly avoided saying that it will ban preventative group treatments [30], saying instead that it will consult with stakeholders [31][32]. A failure to implement a ban on all routine farm antibiotic use including preventative group treatments may result in the UK having some of the lowest standards governing antibiotic use in livestock in Western Europe.

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