Alliance to Save Our Antibiotics response to National Pig Association criticism

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In an interview carried out at the Oxford Real Farming Conference on 5 January 2017, and broadcast on Farming Today on Radio 4 the following day, an Alliance to Save Our Antibiotics spokesperson made several comments about British farm antibiotic use http://www.bbc.co.uk/programmes/b086kxz6 .

The spokesperson compared the progress that had been made in reducing antibiotic consumption in poultry, with the slower progress being made in pigs.

The comments have been criticised by the National Pig Association as a "false portrayal" from an "ill-informed" spokesperson, http://www.npa-uk.org.uk/Response_to_antibiotic_claims.html.

What the Alliance said specifically about antibiotic use in pigs during the interview was that:

1. In the UK, most farm antibiotic use is in the pig industry.
2. The current level of antibiotic use in British pigs is very high, approximately five times higher per pig than in countries like Denmark or the Netherlands.
3. The reductions in antibiotic use in pigs have been much smaller than in poultry.
4. The poultry industry has begun to voluntarily ban routine preventative use, but the pig industry has yet to make any commitment towards a similar ban.

These statements are all accurate and are based on the following data:

1. Most UK farm antibiotic use is in the pig industry.

Below we show that, using the available data sources that total antibiotic use in British pigs in 2015 was *at least* 200 tonnes, out of a total farm consumption of 344–379 tonnes.

There are two sources are available on the levels of antibiotic use in UK farm animals: the Veterinary Medicine Directorate's (VMD) sales data report, which only has partial information on antibiotic use by species due to many products being sold for use in more than one species, and the British Poultry Council (BPC) antibiotic-usage report, which provides use data covering about 90% of the UK poultry-meat industry (chickens, turkeys, ducks, geese). The results from both sources are reported in the VMD report [1].

According to the VMD's sales data report, veterinary antibiotic sales in 2015 were as follows:

Table 1 Weight of active ingredient (tonnes) of antibiotics sold for use in farm animals (2012–2015) [1]

	2012	**2013**	**2014**	**2015**
Sold for use in farm animals only	396	368	383	344
Sold for use in farm and companion animals	33	32	30	35
Total sold for use in farm animals	396–429	368–400	383–413	344–379

Regarding antibiotics which may have been sold for use in pigs or poultry, the VMD report provides the data reproduced in Table 2.

Table 2 Weight of active ingredient (tonnes) of antibiotics which may have been used in pigs and poultry (2012–2015) [1]

	2012	**2013**	**2014**	**2015**
Sold for use in pigs and poultry only	235	217	235	212
Sold for use in pigs only	66	63	66	50
Sold for use in poultry only	47	43	43	38
Sold for use in multiple farm-animal species*	32	30	24	28
Sold for use in farm and companion animals	33	32	30	35
Total sold for use in pigs and poultry	348–413	323–385	344–398	300–363

* These are antibiotics sold for use in more than one farm-animal species, but do not include antibiotics sold exclusively for use in pigs and poultry, and do not include antibiotics sold for use in any companion animals.

Below is the data now collected annually by the BPC on its antibiotic use (note this is use data, not sales data).

Table 3 Use of antibiotics in weight of active ingredient by the British Poultry Council [1]

2012	**2013**	**2014**	**2015**
81.67	94.58	63.46	46.18

Total antibiotic use by the poultry sector in 2015 was clearly higher than 46.18 tonnes, since this figure does not include use in 10% of the poultry-meat sector, use in egg-layers or use in game birds.

However, it is well known that use in poultry-meat birds is much higher than in egg layers. This is partly because concerns about residues in eggs mean that many antibiotics have to be avoided in egg-layers or, if used, the eggs cannot be sold for human consumption for a period of time. It is therefore extremely unlikely that total antibiotic use in poultry in 2015 was higher than 100 tonnes (assuming that the BPC use data is accurate), and this figure is very likely to be an overestimate of total use in poultry.

It therefore follows that since total use in pigs and poultry was between 300 and 363 tonnes in 2015 (see Table 2), that *at least* 200 tonnes was used in pigs in 2015.

Total use in UK farm animals in 2015 was between 344 and 379 tonnes (Table 1), so clearly more than half of all UK farm antibiotic use is in pigs. This is despite the fact that, when measured using the European Medicines Agency's "population correction unit" (PCU) as a measurement of the size of the different livestock sectors, pigs are found to be the smallest livestock sector in the UK. See Table 4.

Table 4 Size of four main livestock populations in UK (in thousand tonnes of "population correction unit") [1]

Pigs	Poultry	Cattle	Sheep and goats
770	1,082	1,743	2,795

2. The current level of antibiotic use in pigs is very high, approximately five times higher per pig than in countries like Denmark or the Netherlands.

Since antibiotic use in British pigs in 2015 was *at least* 200 tonnes, and since the total pig PCU was 770 thousand tonnes (see Table 4), then use of antibiotics in pigs in the UK in 2015 was *at least* 260 mg/kg of PCU. The government's 2018 target for average farm antibiotic use is 50 mg/kg PCU [1].

In comparison, precise data on antibiotic use in pigs is available for both Denmark and the Netherlands (this is use data, not sales data). This data shows that antibiotic use in pigs in Denmark in 2015 was 48 mg/kg PCU and in the Netherlands it was 53 mg/kg PCU [2][3][4].

3. The reductions in antibiotic use in pigs have been much smaller than in poultry

For poultry, we know that large cuts in antibiotic use have been made between 2013 and 2015. During this time, total use by BPC companies has been cut by 51% (see Table 3).

In addition, the use of the critically important fluoroquinolone antibiotics was cut by the BPC in 2015. In 2015, the BPC use of fluoroquinolones fell by about 50% from over 1 tonne to about 500 kg, and use in BPC chickens fell by 96% (use in turkeys fell by 39%). This, however, occurred after an increase in fluoroquinolone use in 2014 to 1,126 kg from 716 kg in 2013.

During 2016, all BPC companies completely ceased their use of fluoroquinolones in chickens (but not turkeys) [5], so it appears that a major step forward has finally been made with this critically important antibiotic.

Furthermore, from 2016 all BPC members committed not to use the antibiotic colistin [6], which is now recognised as an antibiotic of last-resort in human medicine for treating life-threatening and highly antibiotic-resistant infections. This ban on the use of colistin may soon be extended to all poultry producers: proposed new Red Tractor standards for 2017, which were on consultation until the end of 2016, do not permit colistin use in poultry [7].

In contrast to poultry, for pigs no antibiotic use data is available. Instead only the sales data as described in Table 2 is available, from which it is impossible to extract exact estimates for use in pigs.

Table 2 does, however, suggest that antibiotic use in pigs fell in 2015, but there is no evidence of a fall in 2014 (use probably increased). In 2015, the minimum amount used in pigs and poultry (300 tonnes) fell by 13% compared with 2014, whereas the maximum (363 tonnes) fell by 9%. Overall, it appears likely that antibiotic use in pigs in 2015 fell by about 10–15%, whereas in 2014 use in pigs was likely higher than in 2013. For 2016, the NPA say that antibiotic use in pigs has fallen again [8], which would be welcome, but no data on this is yet available.

The available data clearly show that the reductions in antibiotic use in poultry over the period 2013-2015 (51% for BPC, possibly lower for all poultry) have been far larger than reductions in pigs (10-15% perhaps in 2015, even smaller over 2013–2015 period), which is what was stated during the Radio 4 interview. This despite the fact that most antibiotic use is in pigs.

In addition, no information is available on the use of the critically important antibiotics in the pig industry. In 2015, whereas the BPC reduced its use of the fluoroquinolones by 500 kg, total sales of fluoroquinolones in all species only fell by 61 kg from 2,590 kg to 2,529 kg. This suggests that use of fluoroquinolones in species other than poultry may have increased significantly in 2015.

Finally, unlike the poultry industry, the pig industry has made no proposals for banning the use of the last-resort antibiotic colistin in the proposed new Red Tractor standards for 2017 [7]. Colistin is not nearly as widely used in British pigs currently as in some other European countries, and the industry has adopted some voluntary restrictions on use. However, the decision by the Veterinary Medicines Directorate during 2016 to license for the first time in the UK a feed additive containing colistin for use in pigs raises the possibility that use in pig may begin to increase (some British pig farms are unable at present to dispense antibiotics in drinking water, and therefore only use antibiotics in feed for group treatments).

The Alliance's view is that all use of colistin in farm animals should cease as this is currently a last-resort antibiotic in human medicine. The pig industry should therefore follow the example of the poultry industry and amend the Red Tractor standards accordingly.

4. The poultry industry has begun to voluntarily ban routine preventative use, but the pig industry has yet to make any commitment towards a similar ban.

In November 2016, the BPC announced that during 2016 all BPC companies had ceased using antibiotics for preventative purposes [5]. Furthermore, the proposed new Red Tractor standards for poultry for 2017 also state that preventative use would not be permitted [7].

The Alliance has long campaigned against purely preventative mass medication, and since all preventative use in the poultry industry tends to be mass medication, we welcomed this development [9].

In contrast, the proposed new Red Tractor standards for pigs continue to permit preventative mass medication [7]. While all antibiotic use in pigs, as in other animal species, requires a veterinary prescription, there is no requirement for the veterinarian to diagnose any disease in any animals before a prescription for mass medication is written.

The Alliance to Save Our Antibiotics continues to campaign for an end to routine preventative antibiotic use. In particular, the Alliance believes that antibiotic treatments of groups of animals where no disease has been diagnosed in any of the animals should not be permitted.

References

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