ALLIANCE TO SAVE OUR ANTIBIOTICS

FEBRUARY
2024

HOW TO END THE MISUSE OF ANTIBIOTICS IN FARMING

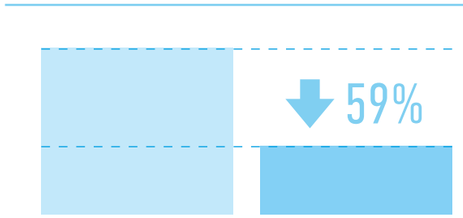
EXECUTIVE SUMMARY AND POLICY ASKS

EXECUTIVE SUMMARY

The spread of antibiotic resistance is being described as 'a pandemic hiding in plain sight', which scientists say directly causes 1.27 million deaths a year worldwide and is associated with 4.95 million deaths a year.[1] For the UK alone, scientists estimate that 7,600 deaths a year are directly due to antibiotic resistance and a total of 35,200 deaths are associated with antibiotic resistance. [2, 3] The overuse of antibiotics in farming is contributing to the scale of the problem.

Despite accepting the seriousness of the crisis, the UK government has not delivered on its promises to align with EU veterinary medicines legislation and ban prophylactic antibiotic treatments of groups of farm animals. Furthermore, improving farm animal husbandry is being overlooked in the battle against antibiotic overuse, despite it being key to achieving responsible use.

Voluntary action by farmers and vets has contributed to a 59% reduction in UK farm antibiotic use per population correction unit (PCU) since 2014. Despite this, farm antibiotic use remains far higher than it should be. Group treatments, which are carried out by adding antibiotics to animal feed or drinking water, still account for about 75% of farm antibiotic use in the UK, where the treatment of individual animals only accounts for 25% of use. This shows that antibiotic use is still not sufficiently targeted. According to the European Medicines Agency, group treatments have the greatest impact on increasing antibiotic resistance, and individual treatments are preferable.



THERE HAS BEEN A 59% REDUCTION IN UK FARM ANTIBIOTIC USE PER LIVESTOCK UNIT SINCE 2014

UK FARM ANTIBIOTIC REGULATIONS FALL BEHIND EU AS UK FAILS TO BAN PROPHYLACTIC GROUP TREATMENTS

The UK is now an outlier in Europe in terms of regulating farm antibiotic use. Current UK regulations still permit routine farm antibiotic use, preventative treatments of groups of animals with antibiotics, and using antibiotics to compensate for poor hygiene, inadequate animal husbandry, lack of animal care, and poor farm management. All these misuses of farm antibiotics were banned over two years ago by the European Union.

The UK was an EU member when the new EU Regulation introducing stricter rules on farm antibiotic use was officially agreed and published in January 2019. The government said at the time that it intended to implement the rules in full, subject to a public consultation. Unfortunately, it has been extremely slow to act.

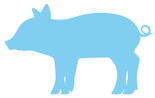
On 2 February 2024, over two years after the EU had already implemented new antibiotic rules, and a year after a Defra public consultation, the UK Government finally published its proposals for new veterinary medicines regulations. The legislation still needs Parliamentary approval, and it is unclear when it will come into force. The new regulations will include some of the rules on farm antibiotic use introduced in the EU in January 2022, including:

- A ban on routine farm antibiotic use.
- A restriction on preventative antibiotic use to exceptional circumstances, where the risk of infection is high, and where the consequences of not using antibiotics is likely to be severe.
- A ban on using antibiotics 'to compensate for poor hygiene, inadequate animal husbandry or lack of care or to compensate for poor farm management'.

If implemented, these rules would significantly improve the regulation of antibiotic use and help achieve more responsible use.

Unfortunately, several important EU rules that the UK Government had said it planned to implement have not been included. As a result, there are major loopholes in the legislation, including:

- The UK Government is not proposing to ban preventative treatments of groups of farm animals with antibiotics. It will therefore remain legal to add antibiotics to the feed or drinking water of a group of animals, where none of the animals have been diagnosed with disease. The EU has banned this practice.
- The UK Government is not proposing to ban the importation of meat, fish, dairy and eggs produced with antibiotic growth promoters or the use of antibiotics to increase yield. The EU will be banning such imports.
- The UK Government is not planning to collect mandatory antibiotic-use data by farm animal species, preferring to rely on voluntary industry data collection. The EU began collecting such data last year and will publish their findings in 2025.
- It will remain legal to add antibiotics to farm animal feed for longer than the maximum duration indicated on the label, and to add more than one antibiotic product to animal feed at a time. The EU has banned these practices.



THE MOST PRODUCTIVE UK SOWS PRODUCE AN AVERAGE OF 37.56 LIVE PIGLETS A YEAR

HUSBANDRY MUST BE IMPROVED TO CUT ANTIBIOTIC USE TO ACCEPTABLE LEVELS

Improving the conditions in which farm animals are kept is key to reducing farm antibiotic use to acceptable levels. Unfortunately, current farm animal-welfare standards continue to permit husbandry practices known to increase infections and the need for antibiotics.

High levels of stress, poor hygiene, inappropriate diets, and high numbers of farm animals kept indoors in close confinement, all contribute to the emergence and easier spread of intestinal and respiratory disease and to the need for antibiotic use. The early weaning of piglets, which can be legally weaned as early as 21 days, can cause post-weaning diarrhoea and is a major reason for high antibiotic use in the pig industry.

Using appropriate breeds, which have good health and resilience, is also essential. Modern breeds are often selected to increase productivity, but this can lead to numerous health and welfare problems and higher antibiotic use.

The growth rate of modern broiler chickens has quadrupled since the 1950s, and intensively farmed chickens are now slaughtered when they are just 28 to 42 days old.[4, 5] Data from the Netherlands shows that fast-growing chickens receive 6 to 9 times more antibiotics than slower-growing birds because of their increased health problems.[6]

16%-30% OF BRITISH DAIRY FARMS KEEP SOME OR ALL OF THEIR COWS INDOORS ALL YEAR ROUND, WITH NO ACCESS TO PASTURE.

Sows are being bred to produce ever-increasing numbers of piglets. The most productive UK sows now produce an average of 17.16 piglets a litter and 37.56 live piglets a year.[7] Such hyper-prolific sows may not have enough teats and can struggle to produce enough milk for all their piglets,[8] making early weaning necessary.

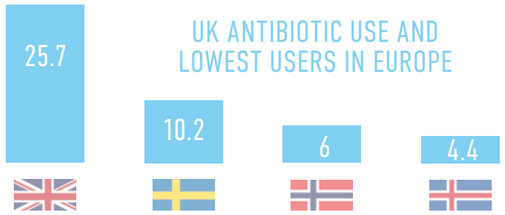
British dairy cows produced an average of 8,163 litres per cow in 2022, up from 5,151 litres in 1990,[9] and compared with a global average of about 2,500 litres.[10] Genetic selection for high milk yield is positively correlated with the incidence of lameness, mastitis, reproductive disorders, and metabolic disorders, conditions frequently requiring antibiotic treatment.

Despite the reductions in UK farm antibiotic use, British use is still 2.5 to 6 times higher per PCU than in Iceland, Norway, and Sweden.[11] Iceland, Norway, and Sweden are the lowest users of farm antibiotics in Europe because they tend to have higher minimum welfare standards, particularly in the pig industry. Antibiotic use per pig is about twice as high in the UK as in France and Denmark, nearly three times as high as in the Netherlands, and over four times as high as in Sweden.[12]

There is limited data on antibiotic use by farming system, but available data indicates that pigs and poultry farmed with access to the outdoors have significantly lower antibiotic use. In the UK, two small surveys have found that antibiotic use in organic pig farming is about 25 times lower per animal than in intensive pig farming.[13,14]

'Zero-grazing' dairy farming is unfortunately becoming more common in the UK. It is estimated that between 16% and 30% of British dairy farms keep some or all of their cows indoors all year round, with no access to pasture.[15,16] Zero-grazing is associated with higher levels of mastitis, lameness, reproductive disorders, and mortality.

Despite the enormous potential for reducing the need for antibiotics by improving farm-animal husbandry, this approach is often overlooked by government and regulators. There is also insufficient focus on this issue from scientists. A review of the scientific literature examining methods for reducing antibiotic use in pig farming found that 94% were clinical trials, mainly examining the effect of alternative feed additives, vaccines, or other types of medication. Only 6% of papers looked at husbandry factors like housing, stocking densities, access to the outdoors, or weaning practices.[17]



FARM ANTIBIOTIC USE IS A SIGNIFICANT SOURCE OF ANTIBIOTIC RESISTANCE IN SOME HUMAN INFECTIONS

The link between farm antibiotic use and resistance in human infections is often downplayed by vested interests. However, there is clear evidence that the overuse of antibiotics in farming is a contributing factor to the rise of antibiotic resistance in human infections.

A statistical analysis, carried out by Canadian academics, of data from 2008 to 2018 from 31 European countries (including the UK) on antibiotic use, in humans and animals, and antibiotic resistance in Campylobacter, E. coli and Salmonella in humans and animals found that farm antibiotic use increased not just resistance in bacteria from animals, but in human infections too. They said that the 'the estimated effects are both substantial and statistically significant'.[18] They found that human antibiotic use also had an effect on antibiotic resistance in humans and animals, but their estimates for the effect of farm antibiotic use were higher.

Furthermore, there is clear microbiological evidence that farm antibiotic use is linked to the emergence of resistance in human Campylobacter, E. coli, Enterococci and Salmonella infections.[19] This occurs for some of the most important antibiotics, like the last-resort antibiotic colistin,[20] or the highest-priority critically important fluoroquinolone antibiotics.[21]

Over the past fifteen years, new livestock-associated strains of the superbugs MRSA and Clostridium difficile have also emerged. These superbugs can spread from farm animals to humans and have caused infections, including some that have been fatal. The most common livestock-associated strain of Clostridium difficile, called Clostridium difficile 078, has become a major cause of infections in humans. In Northern Ireland it is now the most common Clostridium difficile strain causing infections in humans.[22] British research, led by the University of Oxford, has provided evidence that the use of tetracycline antibiotics was a key factor in the emergence of this pathogen.[23] Tetracyclines are the most widely used antibiotics in UK and European farming.

POLICY ASKS

FROM THE ALLIANCE TO SAVE OUR ANTIBIOTICS

Major improvements to farm antibiotic use regulation and animal husbandry standards are needed if truly responsible farm antibiotic use is to be achieved.

The regulation of farm antibiotic use is a reserved matter and is therefore the responsibility of the UK Government. However, for all other policy asks listed below, devolved governments based in Northern Ireland, Scotland, and Wales, and industry bodies also have a responsibility to take action if the UK Government fails to deliver.

We call for the following new regulations and targets:

1 THE UK GOVERNMENT SHOULD IMPLEMENT RESTRICTIONS ON THE USE OF FARM ANTIBIOTICS WHICH ARE AT LEAST AS STRINGENT AS THOSE INTRODUCED BY THE EU IN JANUARY 2022.

a. All forms of routine farm antibiotic use, including preventative group treatments, should be prohibited.
b. Using antibiotics to compensate for poor hygiene, inadequate animal husbandry, lack of animal care and poor farm management should be prohibited.
c. The highest-priority critically important antibiotics, the fluoroquinolones and the modern cephalosporins, should only be permitted when other treatments are unlikely to work, and should only be used in individual animals. No preventative use of these antibiotics should be permitted.
d. Use of the colistin, which is used in human medicine as a last resort antibiotic for treating life-threatening infections, should not be permitted in farming.
e. The importation of animal foods produced with antibiotic growth promoters should be prohibited.
f. Mandatory collection of antibiotic-usage data by animal species and by farming system should be introduced. Usage data should be collected for systems like intensive, higher-welfare indoor, free-range, organic or pasture-fed.

2 SET TARGET TO REDUCE OVERALL UK FARM ANTIBIOTIC USE TO 15 MG/PCU OR LESS BY 2030.

UK Usage in 2022 was 25.7 mg/PCU, so this target is for a 40% reduction between 2022 and 2030. Four European countries (Norway, Iceland, Sweden, and Finland) already have usage levels below 15 mg/PCU.

3 SET TARGET TO REDUCE GROUP TREATMENTS TO LESS THAN 30% OF UK FARM ANTIBIOTIC USE BY 2030.

Individual treatments are more targeted and less likely to select for antibiotic resistance. Group treatments already account for less than 30% of total farm antibiotic use in four European countries (Norway, Iceland, Sweden, and Finland).

To reduce the need for antibiotics, we call for the following major improvements to farm-animal husbandry:

1

INCREASE MINIMUM WEANING AGE OF PIGLETS TO 35 DAYS.

A new minimum weaning age for piglets of 35 days should be adopted, as evidence shows this leads to far lower antibiotic use.

2

BAN TAIL DOCKING OF PIGLETS.

Routine tail docking is not permitted in the UK but is still widely practiced. An estimated 84% of British piglets have their tails docked. Tail docking can cause long-term chronic pain and infections. It is done to minimise tail biting, an abnormal behaviour of pigs linked with the intensive conditions in which they are kept. Risk factors associated with tail biting include high stocking densities, the lack of rooting material, such as deep-straw bedding, poor health, and low-fibre diets. Many of these risk factors are also associated with high antibiotic use. A small number of European countries have fully banned tail docking, except in cases of medical need, and avoid significant tail-biting behaviour through their higher welfare standards, which also help reduce antibiotic use. A ban on tail docking would therefore be expected to contribute to significant reductions in antibiotic use.

3

END THE USE OF FARROWING CRATES.

Farrowing crates are metal cages that are used to confine sows a few days before they give birth, and until their piglets are weaned. About 60% of British sows are confined in farrowing crates when they give birth. This can cause poor cardiovascular function and bone and muscle weakness and for heavy sows, it can also predispose to lameness. Lameness is an important factor predisposing sows to developing urinary tract infections, which are associated with increased antibiotic use. Urinary tract infections are also linked with higher levels of other infections that are treated with antibiotics. Sows should preferably give birth outdoors, or else in free-farrowing systems in pens with straw.

4

USE APPROPRIATE BREEDS.

Animal breeds should be selected to increase health and welfare, rather than focusing exclusively on productivity, as this helps reduce the need for antibiotics. A new minimum slaughter age for chickens of 56 days should be introduced. Hyper-prolific sows, which produce very large numbers of piglets, should be abandoned. There is a need to move away from excessively high-yielding dairy cows.

5

IMPROVE HYGIENE, REDUCE INDOOR STOCKING DENSITY, AND PROVIDE PROPER 'ENRICHMENT'.

Animals should be kept in conditions which enable them to avoid ingesting faeces or inhaling bad air. High stocking densities are associated with worse hygiene, increased levels of stress and easier disease transmission between animals. Broiler chickens in the UK can be kept at densities of up to 38 kg of animal per square metre, which means that the average space allowance per chicken is less than an A4 sheet of paper. This maximum stocking density should be reduced to 25 kg/m2. Similarly, there should be significant reductions to the stocking densities for all animals farmed indoors. Animals should not be kept in barren environments and must be provided with appropriate enrichment materials, for example straw bedding for pigs, which allow them to express natural behaviours and reduce stress.

6

PROVIDE ACCESS TO THE OUTDOORS.

All farm animals should be provided with access to the outdoors, as this is likely to help reduce stress, disease, and antibiotic use. A new animal-welfare law should be introduced requiring that all dairy cows have access to pasture during the summer months. Such a law already exists in Sweden.

7

INCLUDE SUFFICIENT FIBRE IN DIETS.

Reducing the protein content and increasing the fibre content of diets has been used successfully to reduce disease incidence and antibiotic use in both pigs and poultry. Animal-welfare standards should ensure that all farm animals receive sufficient fibre in their daily diets, particularly when they are raised indoors.

GLOSSARY

ANTIBIOTIC
Any substance with a direct action on bacteria that is used for treatment or prevention of infections or infectious diseases.

ANTIMICROBIAL
Any substance with a direct action on micro-organisms used for treatment or prevention of infections or infectious diseases, including antibiotics, antivirals, antifungals and antiprotozoals.

ANTIBIOTIC RESISTANCE
The acquired ability of bacteria to survive or to grow in the presence of a concentration of an antibiotic agent that was previously sufficient to inhibit or kill bacteria of the same species. This makes treating previously simple infections increasingly difficult.

GROUP TREATMENTS
Antibiotic treatments given to groups of animals, most often in their feed or drinking water.

LAST-RESORT ANTIBIOTIC
In human medicine, these antibiotics are reserved for treating serious and often life-threatening infections that are resistant to many other types of antibiotics.

POPULATION CORRECTION UNIT
A theoretical unit of measurement developed to measure the size of a livestock population being treated with antibiotics. It takes into account the number of animals of each species, as well as estimates of their average weight at treatment.

PREVENTATIVE/PROPHYLACTIC ANTIBIOTIC TREATMENT
Antibiotic treatment given to an animal or group of animals before clinical disease has been diagnosed, in order to prevent the occurrence of disease.

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www.saveourantibiotics.org/ our-campaign/husbandry-and-antibiotics/

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ALLIANCE TO SAVE OUR ANTIBIOTICS

The Alliance to Save Our Antibiotics is an alliance of health, medical, environmental and animal welfare groups working to stop the over-use of antibiotics in animal farming. It was founded by the Soil Association, Compassion in World Farming International and Sustain in 2009. The Alliance vision is for a world in which human and animal health and well-being are protected by food and farming systems that do not rely on routine antibiotic use.

Soil Association

COMPASSION in world farming
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sustain
the alliance for better food and farming

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