



THE BPC ANTIBIOTIC STEWARDSHIP SCHEME

LEADING THE WAY IN THE RESPONSIBLE USE OF ANTIBIOTICS

CONTENTS

1.0. Introduction

1.1. Executive Summary	Page 3
------------------------	--------

2.0. Antibiotic Use in the UK Poultry Meat Sector

2.1. Introduction	Page 4
2.2. Bird Health and Welfare	Page 5
2.3. Antibiotic Use Data	Page 6
2.4. Antibiotics and Human Health	Page 11
2.4.1. Resistance in Zoonotic Bacteria	Page 11

3.0. Responsible Usage

3.1. The Responsible Use of Medicines in Agriculture Alliance (RUMA)	Page 12
3.2. UK Government Five Year Antimicrobial Resistance (AMR) strategy	Page 12

4.0. Appendix

4.1. About the UK Poultry Meat Sector	Page 13
4.2. About the BPC Antibiotic Stewardship Scheme	Page 15
4.3. Use of Ionophores	Page 16

For more information contact:

Laura Stearman lstearman@britishpoultry.org.uk
Máire Burnett mburnett@britishpoultry.org.uk

1.0. INTRODUCTION

1.1. Executive Summary

The British Poultry Council (BPC) Antibiotic Stewardship Scheme has compiled this report to demonstrate its strategy for the responsible use of antibiotics in the UK poultry meat sector.

The UK poultry meat sector, through the formation of the Antibiotic Stewardship Scheme in 2011, has taken decisive action to manage antibiotic usage across the sector. In 2012, it introduced a voluntary ban on the use of third and fourth generation cephalosporins, and a commitment to reduce the use of fluoroquinolone antibiotics. In 2016, the Scheme made a further commitment to not use colistin.

It is the first UK livestock industry to pioneer a data collection mechanism to record antibiotic usage covering 90% of the production across Chicken (meat), Turkey and Duck sectors. It is also the first to share this data with the government's Veterinary Medicines Directorate (VMD) and this was published in the recent [UK-Veterinary Antimicrobial Resistance and Sales Surveillance \(UK-VARSS\) report](#). This strident action sets a benchmark for UK livestock sectors ahead of proposed legislative requirements.

Members of the Scheme do not support the routine use of antibiotics, they have in place strict measures to ensure that where they are used, they are used responsibly and in line with the guidelines and principles outlined by the Responsible Use of Medicines in Agriculture Alliance (RUMA).

The Scheme places intense focus on those classes of antibiotics considered to be of 'most highly critical importance' for human health by the World Health Organisation (WHO); use of these antibiotics is only permitted if they are considered by a veterinary surgeon to be the sole therapeutic option to alleviate bird pain and suffering.

The BPC Antibiotic Stewardship Scheme has been notably successful in delivering a strategy for the responsible use of antibiotics. Over the period 2012-2015, production increased by 5%, with UK poultry meat accounting for 44% of total UK meat production. The total antibiotics used in the same period by Scheme members decreased by 44%.

Going forwards, the BPC Antibiotic Stewardship Scheme will collate use data into specific poultry species (chickens, turkeys, ducks) focussing on chicken under proposed changes to EU legislation. Chicken currently accounts for 84% of all UK poultry meat produced.

The initiatives from the BPC have been praised by the government, and they acknowledge that there cannot be arbitrary targets set for antibiotic reduction until viable alternatives become available.

The BPC is committed to continuing this important work alongside the government .

2.0. ANTIBIOTIC USE IN THE UK POULTRY MEAT SECTOR

2.1. Introduction

The UK poultry meat sector has taken significant steps to monitor and identify where the use of antibiotics can be minimised.

The BPC shared 2011-2014 antibiotic use data from the poultry meat sector with the VMD in 2015. These figures were published in the recent [UK-Veterinary Antimicrobial Resistance and Sales Surveillance \(UK-VARSS\) report](#).

The BPC does not support the routine use of antibiotics and measures are in place to ensure that the most highly critical antibiotics are only permitted if they are the sole therapeutic option to alleviate bird pain and suffering:

CONTROL: Use of most highly critical antibiotics is under the direction of the attending veterinary surgeon, where (s)he believes it to be the only product available that will successfully treat the bacterial condition affecting the flock, and the only way to alleviate bird pain and suffering.

ANALYSIS: After bacterial culture and sensitivity testing has been carried out, and joint consideration by a senior director of the food business and the attending veterinary surgeon has been given to alternative therapeutic options, assessing sensitivity, palatability, efficacy and previous experience.

FOOD SAFETY: All meat withdrawal periods are strictly adhered to, as with any other veterinary medicinal product.

EVIDENCE: Full, written, case notes, including justification for the decision, and an assessment of the outcome of treatment are kept for a period not less than three years.

The key focus of the Scheme, is responsible use of antibiotics and when possible a reduction in the use of those antibiotics considered to be of 'most highly critical importance' by the WHO.

The UK poultry meat sector has already taken significant steps by introducing a voluntary ban on third and fourth generation cephalosporins in 2012, committing to reduce the use of fluoroquinolones and restricting the use of colistin in 2016.

As well as focussing on these most highly critical antibiotics, the industry, along with government, are exploring different techniques in human and animal medicine to reduce the risk of Antimicrobial Resistance (AMR).

Responsible use is not simply a reduction in usage:

The Three R's:

REPLACE: review and replace antibiotics used where effective alternatives are available.

REDUCE: reducing the number of birds receiving treatment, through systems based on risk assessments.

REFINE: continue to refine existing strategies, using data collection.

Even with improvements in techniques, management and alternative products, antibiotics will continue to be important in treating bacterial conditions in both human and animal medicine.

As part of responsible prescribing, legislators advise that products that are used should be fully licenced for that species. The aim is to ensure that strict controls are in place using products that have proven safety, quality and efficacy for the target species.

There are a limited number of licenced products available for food-producing animals, fewer available for chickens (meat) and for species such as turkeys and ducks, there are fewer still.

It is vital that the industry retains these essential tools to protect bird health and alleviate bird pain and suffering.

2.0. ANTIBIOTIC USE IN THE UK POULTRY MEAT SECTOR

2.2. Bird Health and Welfare

Driving standards in bird health and welfare is paramount to the BPC.

The sector hold to the 'five freedoms':

- Freedom from hunger and thirst
- Freedom from discomfort
- Freedom from pain, injury and disease
- Freedom to behave normally
- Freedom from fear and distress

As well as reviewing the use of antibiotics and exploring alternatives, the industry places emphasis on stockmanship and management.

People are the key drivers to the success of the poultry meat sector. In 2014, the sector employed 79,300 people (33,800 direct, 44,500 indirect) an increase of 12% on the previous year. The industry employs highly-skilled individuals in a variety of positions on farm, in processing plants, hatcheries, laboratories, marketing and sales and research and development.

The BPC operates a scholarship programme along with other training and skills initiatives to attract and recruit people into the industry.

The BPC also works closely with training providers to deliver staff awareness and training across the industry, including bird welfare, from egg to plate.

The UK poultry meat sector is also leading on the development of welfare guidance, jointly owned by industry and government to be published in 2016, with support and endorsement from Defra.

The three essentials of stockmanship that support the five freedoms are:

- Knowledge of animal husbandry
- Skills in animal husbandry
- Personal qualities

Employees must have a sound knowledge of the biology and husbandry of animals, including how their needs may be best provided for in all circumstances.

They must also show demonstrable skills in observation, handling, care and treatment of animals, and problem detection and resolution.

The right personal qualities are important; affinity and empathy with animals, along with dedication and patience.

The industry is committed to a robust skills framework for the UK poultry meat sector.

Poultry Passport

The British Poultry Training Scheme was established to develop a consistent level of training for every agricultural role in the UK poultry meat industry.

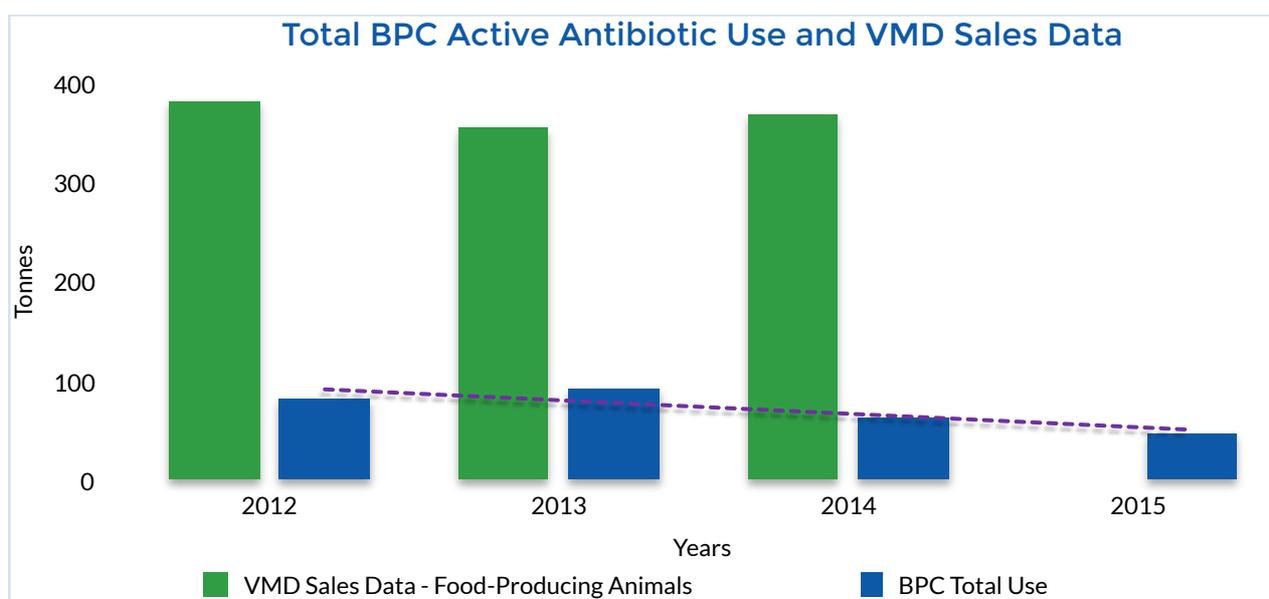
It brings together national poultry processors and growers; Lantra, the BPC, National Farmers Union (NFU) and Poultec who are committed to a robust skills framework for poultry agriculture that mandates minimum standards and seeks to measure and monitor the development of all employees in the sector.

The group has defined the mandatory training required for each role and grouped them into four levels supported by 11 Approved Training providers. Everyone enrolled onto the scheme has a Poultry Passport. The Poultry Passport System is a secure, on-line training recording system. While any training can be recorded on the passport, any courses that count towards the mandatory training must be approved, to confirm they meet the scheme's standards. The system generates reports to identify training needs, ensuring people development is to the right standard and monitored effectively.

2.0. ANTIBIOTIC USE IN THE UK POULTRY MEAT SECTOR

2.3. Antibiotic Use Data

Figure 1: BPC Total Active Antibiotic Use 2012-2015 (representative of 90% of the sector) and VMD Sales Data for products licenced for use in Food-Producing animals 2012-2014.



Source: British Poultry Council, 2016

The BPC began collecting antibiotic use data in 2011 from members of the BPC Antibiotic Stewardship Scheme, the collection mechanism was validated in 2012.

The data has been submitted by both BPC members and non-members to allow for a more accurate representation of actual use in 90% of the UK poultry meat sector (chickens, turkeys, ducks).

Figure 1 shows total BPC use data from 2012-2015, with the inclusion of VMD sales data 2012-2014 for products licenced for use in food-producing animals.

On average, the Scheme used around 22% of total products sold that are licenced for use in food-producing animals (based on 2012-2014 information). In 2014 the total percentage used by the Scheme was 17%.

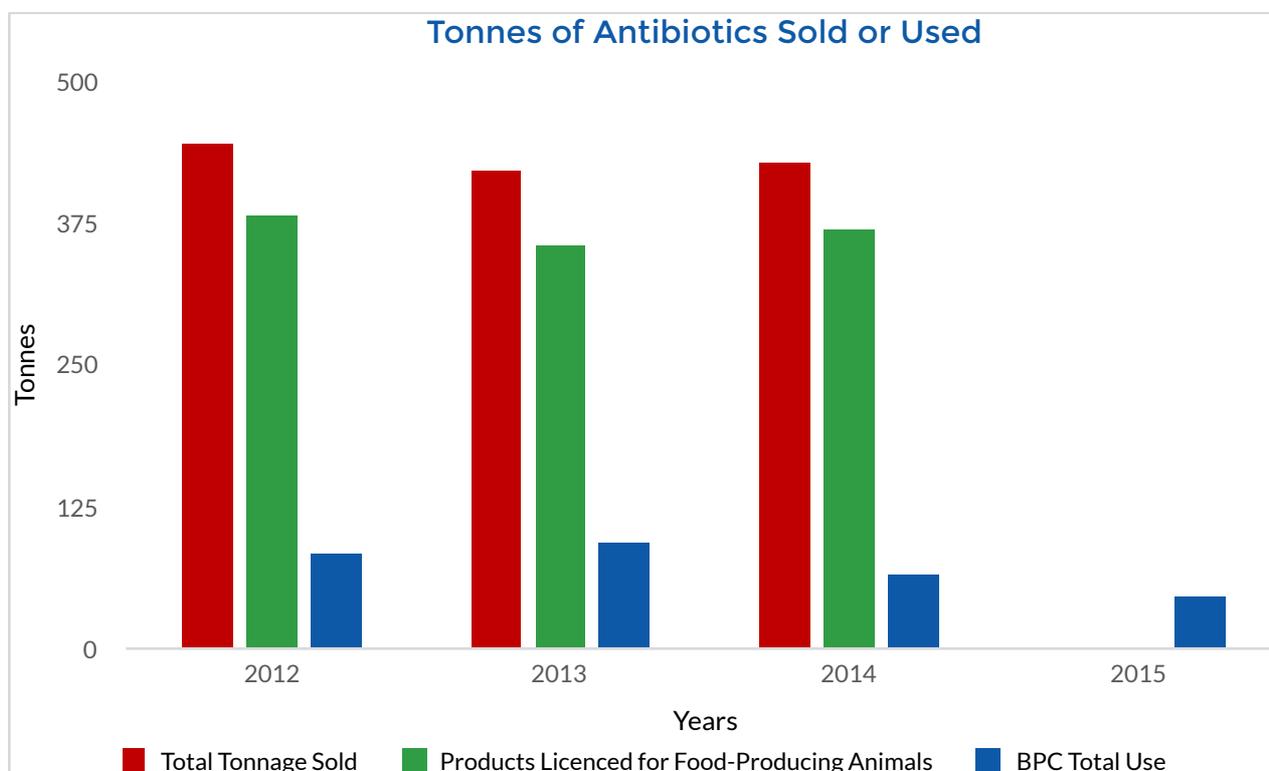
From 2012-2015, the total usage of antibiotics used by the Scheme has been reduced by 44%.

During this time period, the industry has achieved almost a 5% increase in production (see figure 6).

There may be some variation in the use of antibiotics in poultry species due to different health challenges. 2013 saw a slight increase in antibiotic use in the industry. This has been attributed to feed quality issues resulting from a poor harvest spread over that period.

In addition, the industry also saw a 4% rise in production with over 28 million more birds during this period (see figure 6). The industry has since achieved an increase in production beyond 2013 levels (see figure 6) while reducing total use of antibiotics by 50% (see figure 1).

Figure 2: BPC Total Active Antibiotic Use 2012-2015 (representative of 90% of the sector) and VMD Sales Data for products licenced for food-producing animals and total tonnage sold 2012-2014.



Source: British Poultry Council, 2016

The UK poultry meat sector is the first livestock sector to have shared antibiotic use data with the VMD and stakeholders.

Vertical integration allows for a very short supply chain, with high levels of control and traceability from egg to plate. This short supply chain enabled the BPC Antibiotic Stewardship Scheme to collect and collate antibiotic use data from companies that together represent around 90% of the UK poultry meat sector (chickens turkeys, ducks). Recording and collating this data, allows for the sector to accurately monitor its actual use.

The BPC acts as a central data collection hub, and collates the data into a summary. The format used to collect the information, feeds directly into the newly created VMD central database. Producers submit their data to the BPC on an annual basis, using a standardised data sheet. Quantities of active ingredients (mg/kg), by product type, are entered into the sheet by producers.

Proposals under the EU Veterinary Medicines Directive would require Member States to collect actual use data from the meat chicken, cattle and pig sectors.

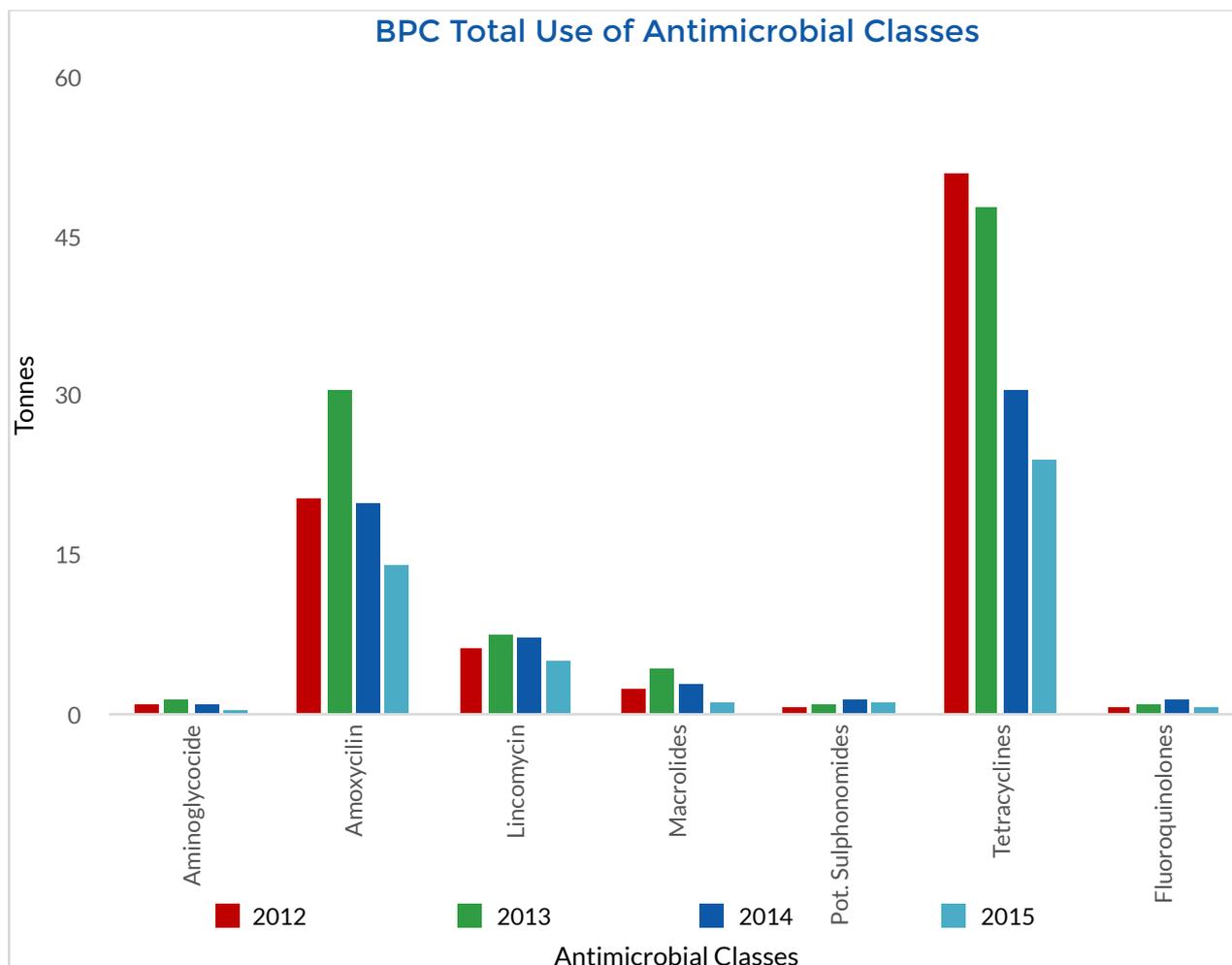
The BPC has already implemented a successful mechanism for the VMD to collect data from the UK poultry meat sector.

Figure 2 shows on average, the sector used 18% of total tonnage of antibiotics sold (to include products used in non food-producing animals) between 2012-2014.

Of the total products sold between 2012-2014 that are licenced for food-producing animals, the UK poultry meat sector used 22%. During this same period, UK poultry meat accounted for 44% of total UK meat production (see figure 6).

The Scheme believes that by continuing to collate data and share this with government and stakeholders, it will continue to drive best practice across the UK poultry meat sector.

Figure 3: BPC Total Use of Antimicrobial Classes 2012-2015 (representative of 90% of the sector)



Source: British Poultry Council, 2016

Antibiotics are classified into classes or families according to their structure or mode of action. The WHO has classified certain antibiotics on their relative importance for human health.

The Scheme has focussed on restricting the use of those classified as most highly critical for human medicine to protect the integrity of these products for human and animal health.

Some products that are categorised as most highly critically important for human medicine are still vital for the UK poultry meat sector to protect bird health.

Figure 3 shows the amount of each class of antimicrobial prescribed between 2012-2015 for use in the UK poultry meat sector (chickens, turkeys, ducks).

In 2013 the sector was affected by a poor harvest, reducing feed quality and resulting in increased health challenges. Use of antibiotics increased this year to treat health issues. The sector also saw a growth in production of 4%.

Macrolides are a class of antibiotics considered to be of most highly critical importance for human medicine. Use of macrolides in the UK poultry meat sector peaked to just over four tonnes in 2013. Since 2013 there has been a consistent year-on-year drop in use of 50%.

In 2015, amoxicillin use was reduced by 46% from 2013 to just under 14 tonnes.

Another significant reduction was seen in the use of tetracyclines, with a decrease of around 47% from 2012 to under 24 tonnes.

In 2012 the BPC Antibiotic Stewardship Scheme recognising the WHO categorisation of fluoroquinolones as "most highly critical antibiotics for human health" introducing a voluntary commitment to reduce the use of fluoroquinolone antibiotics.

Fluoroquinolone antibiotics are broad-spectrum antibiotics frequently used in human medicine due to their effectiveness in treatment of both gram-negative and gram-positive bacterial infections.

The UK poultry meat sector reported an increase in the use of these antibiotics from 2012-2014 (see figure 3). The Scheme members discussed this reported increase in use at its meetings and formulated new strategies and measures to reduce the amount of fluoroquinolone antibiotics used.

Of fluoroquinolone antibiotics sold for food and non food-producing animals between 2012-2014, the UK poultry meat sector used on average 28%. VMD sales data published in the [UK-VARSS report](#), showed sales of two tonnes of fluoroquinolone antibiotics sold in 2012 and three tonnes in 2013 and 2014 for food and non food-producing animals. Fluoroquinolone usage in the UK poultry meat sector peaked at just over one tonne in 2014, this was reduced by 48% to half a tonne in 2015.

Fluoroquinolone antibiotics are used as a 'last resort' in the UK poultry meat sector. They

will only be administered after alternative options have been explored.

As noted on page four of this report, "there are a limited number of licenced products available for chickens, and for species such as turkeys and ducks there are fewer still."

The BPC Chicken sector reported a 96% reduction in the use of fluoroquinolone antibiotics from 2014-2015 recording a total use of 0.02 tonnes (20kg).

Effective therapeutic options are very limited for health issues in other poultry species such as turkeys. The fluoroquinolone antibiotic enrofloxacin is often the only licenced product available that will successfully treat certain bacterial conditions, and therefore the only effective way to alleviate bird pain and suffering.

The BPC Turkey sector achieved a significant reduction in use of fluoroquinolone antibiotics from 2014-2015 of 39%.

The BPC Duck sector has even fewer licenced products available. Despite this limited availability, the duck sector also achieved a reduction in its already minimal use of fluoroquinolones to zero.

With further reviews to treatment strategies, the industry expects to see a further reduction in the use of fluoroquinolone antibiotics in 2016.

2.0. ANTIBIOTIC USE IN THE UK POULTRY MEAT SECTOR

2.4. Antibiotics and Human Health

In 2013 UK Chief Medical Officer Dame Sally Davies said, "Antibiotic resistance is one of the greatest threats to modern health and we face a future without cures for infection if antibiotics are not used responsibly."

AMR is a growing concern on a global scale and the perceived misuse of antibiotics in agriculture continues to attract interest from consumers, regulators, retailers and parliamentarians.

The responsibility to protect the integrity of antibiotics is shared for those prescribing or using antibiotics in both human and animal health.

BPC took action to address this concern in 2011, beginning the collection of antibiotic use data and sharing this with regulators and wider stakeholders.

2.4.1. Resistance in Zoonotic Bacteria

AMR is a broad term for the resistance of a microorganism (including bacteria, fungi, viruses and parasites) to an antimicrobial drug that was previously an effective treatment of infections caused by it.

The emergence of resistant strains is a natural phenomenon that occurs when microorganisms replicate, or when resistant traits are exchanged between them. The misuse of antimicrobial drugs can accelerate this process.

Antibiotic resistance more specifically, is the resistance to antibiotics that occurs in common bacteria that cause infections.

Resistance can be an inherent feature of certain bacteria, or bacteria can acquire resistance to an antibiotic to which they were previously sensitive.

The resistance can be acquired through natural mutation of the bacteria as an advantage for survival. This resistance can be transferable when multiplying bacteria share genetic material with other bacteria. These processes take place in both human and animal populations.

The European Centre for Disease Control stated in the [AMR fact sheet](#) for the general public that, "Certain resistant bacteria that are associated with food consumption, such as campylobacter or salmonella, may be transferred from animals to humans through food. People may also acquire resistant bacteria from direct contact with animals. However, the major cause of antibiotic resistance in humans remains the use of antibiotics in human medicine".

The UK livestock sectors accept that they have a role to play in ensuring that antibiotics are used responsibly. The UK poultry meat sector has led the way in responsible use of antibiotics.

The EU Commission now requires member states to conduct surveys to monitor the prevalence of Extended Spectrum Beta-Lactamase (ESBL) producing bacteria. These bacteria are capable of producing ESBL enzymes that break down Beta Lactam, the active part of some groups of antibiotics, effectively rendering those bacteria resistant to those antibiotic types.

Towards the end of 2016 the VMD sales data will be collated with the European Food Standards Agency (EFSA) Scientific opinion on public health risks of ESBLs in food-producing animals.

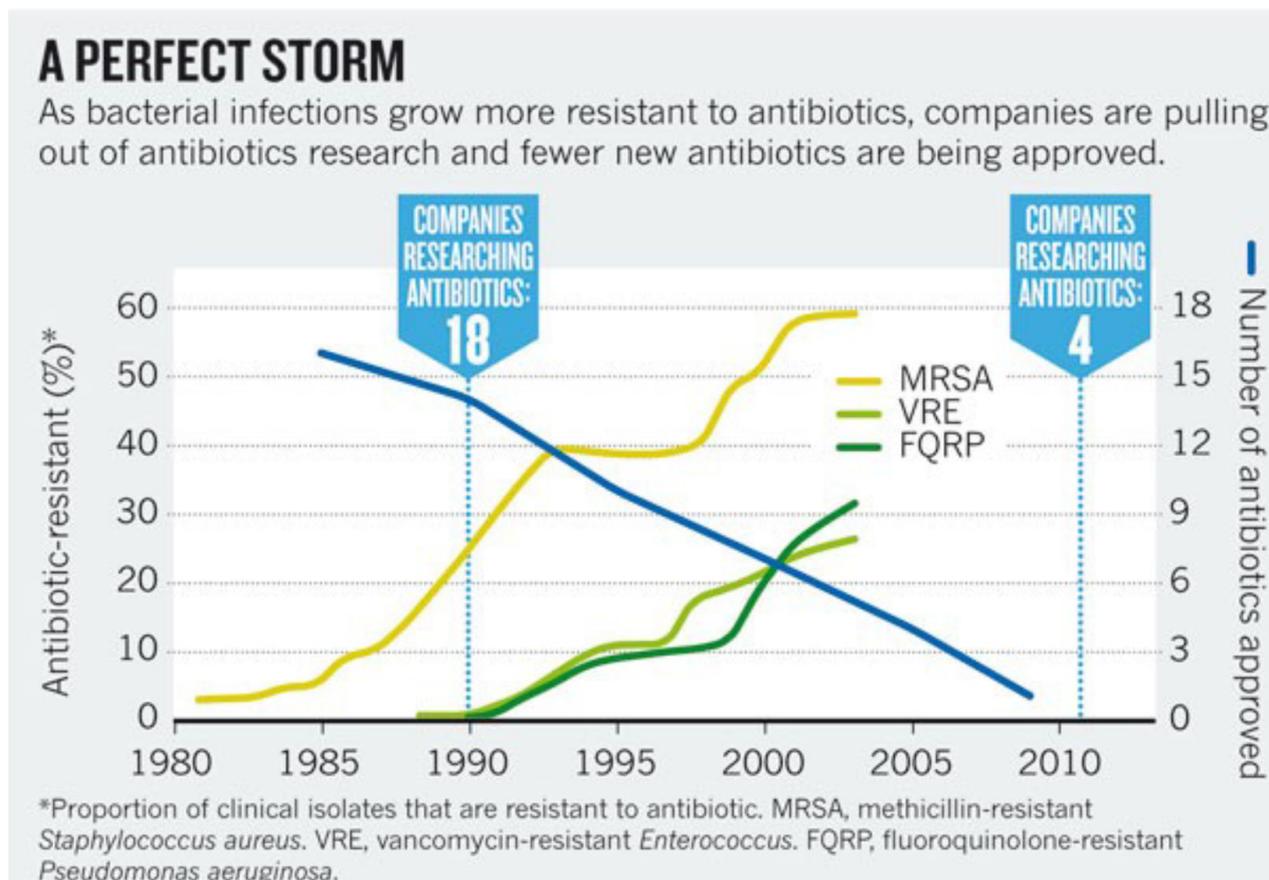
In 2014, the BPC Antibiotic Stewardship Scheme embarked on a joint piece of research with the Animal and Plant Health Agency (APHA) at Weybridge, funding the APHA Survey of Extended spectrum beta-lactamase (ESBL) producing *E. coli* in 2014-15.

The UK poultry meat sector is the first sector to have supported research into this issue.

The survey found that the prevalence of ESBLs in GB chicken (meat) flocks remains similar to or lower than surveys in broiler flocks from other EU countries.

It also found that the main ESBL CTX-M gene sequence types identified are different from those most frequently seen in humans.

Figure 4: 'The Innovation Gap'; Research into Novel Antibiotics



Source: www.nature.com, 2011

A contributing factor to antibiotic resistance, is the limited availability of effective antibiotics for human and animal health.

Referred to as 'the innovation gap', the lack of novel antibiotics being developed virtually stopped 20 years ago (see figure 4).

This is likely due to the cost of developing an effective product and delivering it to the market. Particularly if highly effective products would then be placed on the list of critically important antibiotics, which prescribers would then have to use sparingly.

At the World Economic Forum in Davos, in January 2016, pharmaceutical, biotechnology and diagnostics industries identified the need for the 'innovation gap' to be addressed.

They stated that antibiotics will continue to play a crucial role both in human and animal health, and must be preserved.

The group also called on governments to work in partnership with industry on comprehensive actions to address this.

The forum believes that governments need to allocate funds necessary to create a sustainable and predictable market for new technologies encompassing antibiotic stewardship initiatives, and improving the financial return to fill 'the innovation gap'.

Significant investment is needed in research and development to ensure that prescribers have the vital tools needed to protect both animal and human health.

3.0. RESPONSIBLE USAGE

3.1. Responsible Use of Medicines in Agriculture Alliance (RUMA)

The BPC is a member of RUMA, only administering antibiotics under professional veterinary supervision and guidance and in line with the RUMA principles.

Established in 1997, RUMA brings together representatives from the British livestock industry to promote the highest standards of food safety, animal health and animal welfare in the British livestock industry.

The number of organisations in the group, reflects the importance of traceability, transparency and accountability at all stages in production.

RUMA is also an associate member of the European Platform for the Responsible Use of Medicines in Animals (EPRUMA).

The list of RUMA guidelines for responsible use of antimicrobials in poultry and game bird production include:

- All poultry and game producers must be totally committed to producing safe food
- Poultry and game producers have a legal responsibility to safeguard the health and welfare of animals on their farm
- Treatment with a medicine that requires a veterinary prescription should only be initiated with formal veterinary approval
- Draw up, implement and regularly review an appropriate flock health plan that outlines routine preventive treatments (e.g. biosecurity, vaccination and worming programmes etc.) and disease control policy, in association with the attending veterinary surgeon .

The full list of RUMA guidelines can be found at www.ruma.org.uk.

3.2. UK Government Five Year Antimicrobial Resistance (AMR) strategy 2013-2018

The scale of the potential threat of AMR and the case for UK action was published in March 2013 in the [Annual Report of the Chief Medical Officer, 2011](#).

The government's five year strategy sets out actions to address the key challenges of AMR.

The government acknowledges that antibiotic resistance cannot be eradicated, but can be managed to limit the threat to, and minimise the impact on human and animal health.

The strategy is part of a 'One-Health' approach covering people, animals, agriculture and the wider environment.

This approach is a worldwide strategy for expanding collaborations in all aspects of health care for humans, animals, and the environment.

The focus of the five year strategy is around three strategic aims:

- Improve the knowledge and understanding of AMR.
- Conserve and steward the effectiveness of existing treatments .
- Stimulate the development of new antibiotics, diagnostics and novel therapies.

The UK poultry meat sector is continuing to work closely with the government to support their efforts to minimise the impact on human and animal health.

The data provided by the BPC, along with the focus on the [key areas](#) identified in the five year strategy, will assist the UK government in addressing the key challenges.

4.0. APPENDIX

4.1. Appendix I: About the UK Poultry Meat Sector

Poultry meat makes up almost half (49.5% in 2015) of all meat produced in the UK, (see figure 5).

The popularity of poultry meat has grown due to its affordability and it being a wholesome and nutritious choice.

The UK poultry meat industry is vertically integrated. Poultry companies cover all steps of the supply chain from breeding, rearing, hatching, growing and processing.

Vertical integration allows for a very short supply chain, with high levels of control and traceability from egg to plate.

In 2015 the UK produced 1.6 million tonnes of poultry meat (see figure 5) with 1.4 million tonnes of production from chicken; nearly 10% above average production levels in the 2000-2013 period.

The BPC supports assurance schemes such as Red Tractor Farm Assurance. These schemes, which are independently audited, ensure that the industry continues to drive best practice on a number of key areas such as bird health, welfare, biosecurity, traceability, food safety and the environment.

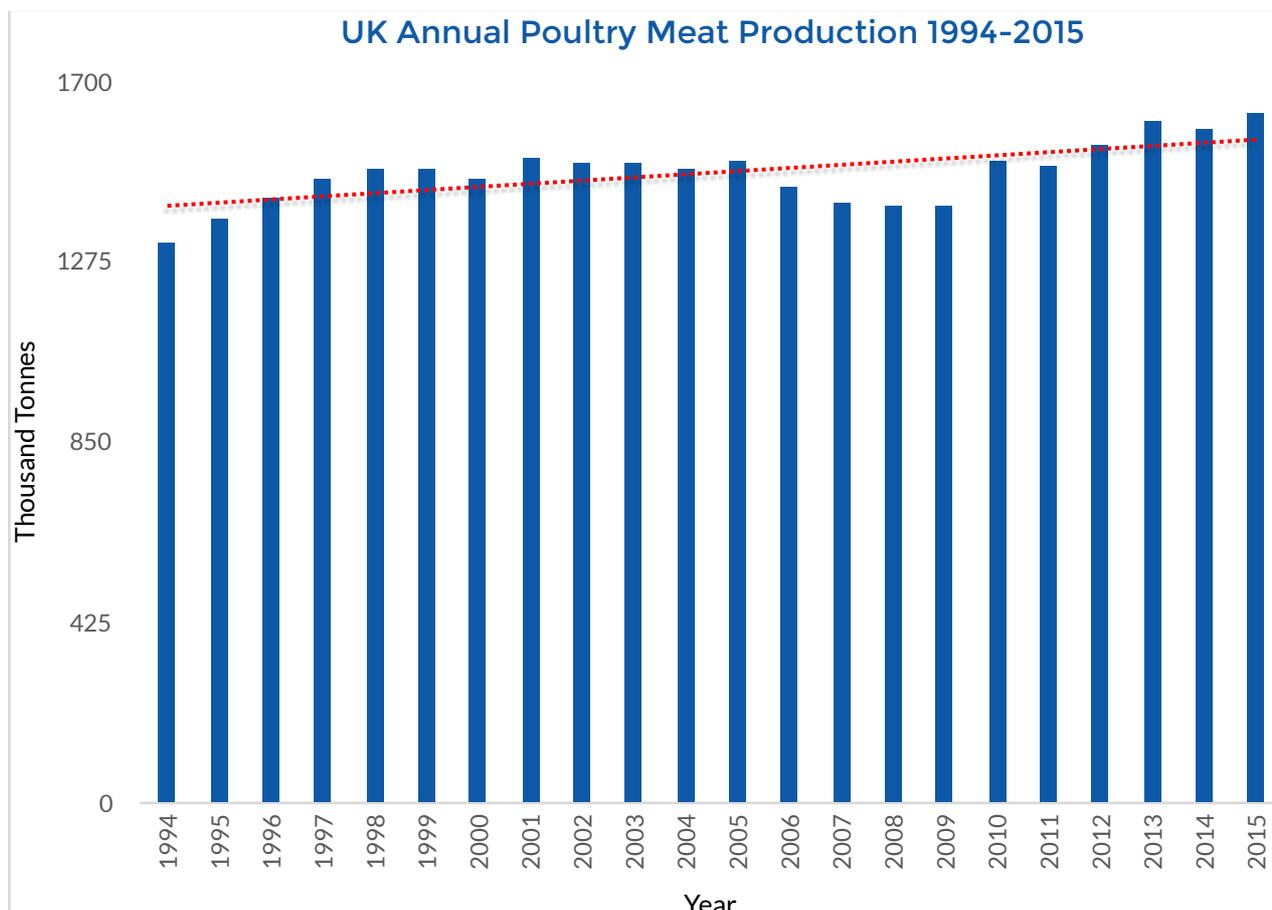
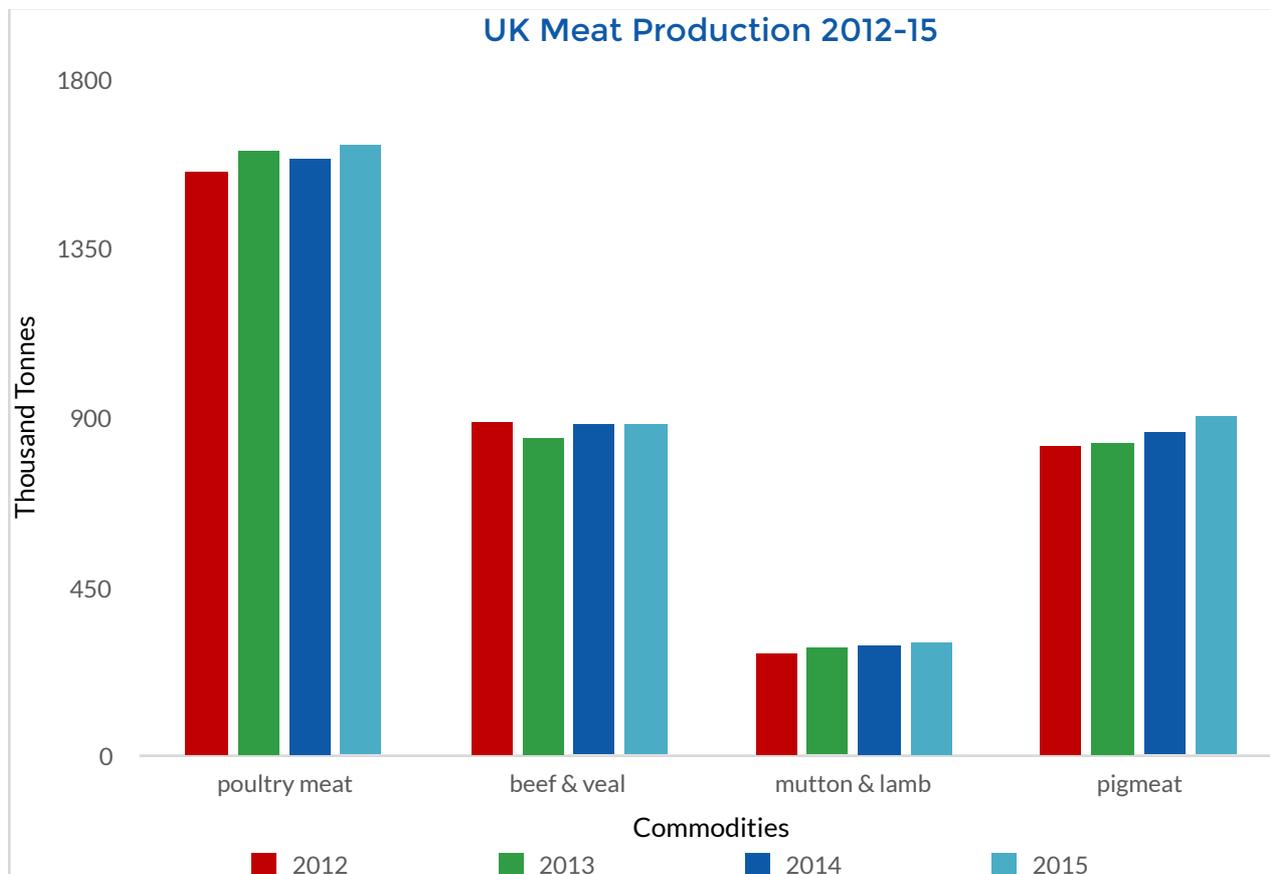


Figure 5: UK Annual Poultry Meat Production, 1994-2015

Source: <https://www.gov.uk/government/statistics/poultry-and-poultry-meat-statistics>, 2016

Figure 6: UK Meat Production 2014-15



Source: www.gov.uk/government/statistics/poultry-and-poultry-meat-statistics, 2016
www.gov.uk/government/statistics/cattle-sheep-and-pig-slaughter

As figure 5 shows, the UK poultry meat sector is continuing to see a growth in production.

Figure 6 shows the total UK meat production from 2012-2015.

During 2012-2015 UK poultry meat accounted for 44% of total UK meat production.

As an unsubsidised sector, the industry’s ability to adapt, and its resilience when faced with a challenge, has resulted in a thriving sector, driving best practice and leading in innovation.

Consumers can be confident that in buying UK poultry meat, they are guaranteed high quality, affordability and a sustainable product.

The British Poultry Council

The British Poultry Council is the leading representative organisation for companies and individuals engaged in breeding, hatching, rearing and processing chickens, turkeys, ducks and geese to produce poultry meat.

BPC members are responsible for producing over 90% of the UK’s total output of poultry meat, which included over 929 million birds in 2015. Based on sales of £6.9 billion in 2014, the poultry meat industry made a £3.6 billion gross value added contribution to UK GDP. The industry supports 79,300 jobs in the UK – 34,800 direct, 29,400 in the supply chain and 15,100 in wage consumption.

4.0. APPENDIX

4.2. Appendix II: About the BPC Antibiotic Stewardship Scheme

The BPC Antibiotic Stewardship Scheme was established in 2011 by the BPC, bringing together expertise from producers and poultry veterinarians.

The main objectives of the BPC Antibiotic Stewardship Scheme are:

- To maintain the integrity of all classes of antibiotics to support both human and animal health
- To collect and monitor use of all antibiotic classes in the UK poultry meat sector
- To work with the UK government sharing antibiotic use data with the VMD
- To support further research into ESBLs in GB broiler flocks
- To promote and apply best practice at all steps of production

The Scheme focuses its efforts in particular on those antibiotics considered to be of 'most highly critical importance for human health' by the WHO.

The BPC Antibiotic Stewardship Scheme introduced a voluntary ban on the use of third and fourth generation cephalosporins on 1 January, 2012 with a commitment to reduce the usage of fluoroquinolones in day old broilers.

The VMD annually collects and publishes data on antibiotic products sold that are licenced for use in food-producing animals.

To assist government, to know what percentage of products sold were used by the UK poultry meat sector, the BPC decided that it should begin collecting actual usage data in 2011.

The Scheme was satisfied that the information collected from 2012 onwards was robust, producing data representative of over 90% of UK poultry meat production (chickens, turkeys, ducks).

Until the BPC and its members took these proactive steps to determine actual usage in the sector, the sales data collated by the VMD was the only mechanism to monitor antibiotic products in livestock (sales not usage).

The Scheme analyses the dataset and identifies where it should take action.

Members of the Scheme wish to remain open and transparent with government and stakeholders on antibiotic use in the UK poultry meat sector.

In 2015, the BPC shared its data with the VMD; published in the [UK-Veterinary Antimicrobial Resistance and Sales Surveillance \(UK-VARSS\)](#) report.

The BPC is the first livestock sector group to share its use data with government and stakeholders.

This initiative by the UK poultry meat sector received government recognition.

The BPC Antibiotic Stewardship Scheme recognised the importance of colistin as an antibiotic of last resort for human medicine. From 2016, the BPC membership undertake not to use colistin in their flocks.

The BPC Antibiotic Stewardship Scheme is committed to continue to drive best practice across the industry.

4.0. APPENDIX

4.3. Appendix III: Use of Ionophores

Ionophores are used globally for the control of Coccidiosis.

Coccidiosis is caused by protozoal intestinal parasites, which can be found in all types of production; indoor, outdoor, conventional and organic.

Coccidial parasites that affect chicken are specific to chicken and cannot infect any other avian or mammalian species including humans.

Ionophores have a unique mode of action against coccidial parasites. This mode of action affects the sodium/potassium 'pump' in the cell wall of the parasite. This action results in increased extracellular water being drawn into the cell of the parasite, causing it to rupture.

Ionophores also have some antibacterial activity against gram positive bacteria and because of this, some may class them as antibiotics. However, their mode of action is different to other antibiotic classes.

Ionophores are not used in human medicine and therefore, use in chicken production is not known to result in transmission of AMR to humans.

Some groups require that Antibiotic Free (ABF) chicken production does not allow the use of ionophores. However, ionophores are extremely useful and effective products for the control of coccidial parasites in chicken production.

The use of ionophores does not increase the risk of AMR development in either the chicken or the wider community.

For more information contact:

Laura Stearman lstearman@britishpoultry.org.uk
Máire Burnett mburnett@britishpoultry.org.uk