



# Resisting Resistance

## **BPEX strategy for reducing antimicrobial usage across the sector**

### ***Summary of the BPEX R&D Strategy Development workshop***

On the 9<sup>th</sup> of October 2014 at Friends House, in London, the Pig Health and Welfare Council (PHWC) Antimicrobials Subgroup held the first 'Industry Round Table Workshop'. The focus of the day was to explain the pressing need for a better understanding of the levels of antimicrobial usage within the pig sector as well as to set a framework of points required to be investigated before any measures are set in place.

### ***Speaker Summary***

John Fitzgerald, General Secretary of the Responsible Use of Medicines in Agriculture alliance (RUMA) and also chairman of the Pig Health and Welfare Committee antimicrobials subgroup introduced proceedings by highlighting the need for sector wide consultation on the issues surrounding antimicrobial resistance and usage within the sector. John highlighted the need for open discussion to avoid blunt reductions in antimicrobial usage within the sector.

The morning programme consisted of seven excellent presentations, giving food for thought on a range of topics. The First talk was given by Suzanne Eckford (Antimicrobial Resistance Unit, VMD) highlighted significant concerns over the rising antimicrobial resistance (AMR) problems, with a significant increase from 3 to 800 reported cases of resistance, from 2003-2012. This has led to AMR being classified as a 'ticking time bomb' to public health.

Liz Redmond (VMD) Highlighted the limitations in the data already available within the pig sector, mainly due to insufficient available data on antibiotic usage and the issues arising from mixed pig and poultry classifications for medicine sales. The talk concluded by outlining the need for electronic collection of data on antimicrobial usage which is, ideally, capable of linking up with existing electronic medicines records.

Joergen Lindahl (ØVet Consultancy, Denmark) gave a history of the Danish approach to antimicrobials. This instructive talk highlighted how ambitious targets for antimicrobial reduction and a system of decoupling of dispensing medicines from the veterinary profession, has allowed a computerised prescription service VETSTAT to be established. VETSTAT is used for recording total veterinary medicine sales for each animal species as well as benchmarking and targeting persistently underperforming farms. Data within this system has become increasingly available to the general public and media.

David Burch (Octagon Services Ltd.) discussed some of the data already available about antimicrobial usage, from research within the pig sector. Currently, in feed antimicrobials make up the largest represented group with premixes making approximately 85.4% of the total industry usage, whilst injectable antibiotics usage is negligible. Overall it was agreed that there were some positives in the preliminary data collected, but measures still need to be put in place.

Lucy Coyne and Annie Davis (Defra) both highlighted the viewpoints of AMR from the government perspective. Interviews with vets and industry has highlighted a mutual relationship between vets and farmers for information transfer, making it important for both to be accommodating of any new procedures implemented. Any procedures in place will also have to take into consideration the practicalities of farming pigs within the UK and the potential welfare implications of a hard line being taken on Antibiotic usage.

The final talk of the morning was from Poultry Vet Dan Parker (Slate Hall Veterinary Practice). He provided an insight into the measures the poultry sector is already taking in the field of antimicrobial usage. The effort to reduce antimicrobial usage has been industry led with voluntary withdrawals of some antibiotics from use. The poultry meat sector is leading the way in this field and is looking at innovation rather than regulation to achieve targets.

### ***Round Table Discussions***

In the afternoon there was a chance for attendees to feed into some of the key issues in the area of AMR by participating in round table discussions involving four groups made up of a mix of people from across the pig sector.

Each table were asked to discuss one of four topics during the breakout sessions. 1) The collection and usage of data, 2) How can we optimise antimicrobial usage, 3) What alternative approaches exist to assist in reducing antimicrobial usage and 4) How can we learn and share more effectively with other EU pig industries and sectors? A BPEX facilitator recorded the topics raised at each table – which were then combined onto one list at the front of the room for plenary discussion. These sessions generated lively discussion, which raised a number of interesting challenges and novel solutions.

To allow compliance to proposed EU regulations on antimicrobial usage, as well as the need to benchmark levels of medicines used on farm there is a need for a better recording system to be put in place. This would both ameliorate the current issues around levels of antimicrobial usage across the industry, but also demonstrate a responsible and proactive approach from the sector.

### ***Topic 1: The collection of Data***

In turn each group moved between tables to answer four questions. The question for topic one was *“The collection and usage of data: What are the barriers, tools and best approach to achieve this?”* This topic sparked much debate on where the data should be collected from and who should be responsible for collecting or collating the data, as well as who should have access to the information. It was agreed by all that the framework for recording data on antimicrobials is already in place on farm, through the farm assurance schemes, most notably Assured Food Standards (Red Tractor). In a similar manner feed mills and veterinary practices also have records of medications that are purchased and dispensed on file. Unfortunately the recording systems across the sector are, currently, not cross compliant. All the groups recognised the need for baseline figures on the cross sector usage of antimicrobials; however it was decided that the exact information required and the source of this data needed to be debated further.

## ***Conclusions from Topic 1***

The conclusions, on topic one, were that the majority recognised farm-level recording of data on antimicrobials would be the best place to get accurate figures, although there may, potentially be some issues with accuracy and IT literacy. A need was identified for assistance from the feed suppliers to get summary data on the amounts of antimicrobials supplied. In response the feed companies requested a standardisation of formats and an indication of the frequency by which the data would have to be reported. The ideal solution would be a single system of reporting which would satisfy all of those who require the data, including retail customers; however the feasibility of this has yet to be explored.

## ***Topic 2: Optimising Antimicrobial Usage***

Topic 2 looked at the question ‘*how can we optimise antimicrobial usage?*’ Again discussion on this topic was lively, with many interesting points being raised. Many of the points related to the issue of defining ‘successes’ in terms of reduction of antimicrobials. Points were raised on the fact that reducing antibiotic usage by an arbitrary amount does not correlate with a reduction in antimicrobial resistance. With questions posed on whether radical reductions in antibiotic usage may also impact upon welfare. These thoughts led to an identified need for a framework to ‘define what success looks like’. It was agreed that some of the existing regulatory framework on antimicrobials may need to be reviewed and better guidelines on what defines prophylaxis made available. In addition there were some calls to further investigate more directed routes of mass antimicrobial administration, such as using water soluble antibiotics in directed delivery systems.

## ***Conclusions from Topic 2***

Conclusions from topic two were to refine the current definitions of medicine usage and to determine what measures would best be set in place alongside reduction of antimicrobial usage. Further investigation is required into potential alternative, more targeted, approaches to antibiotic administration linked with better tests available for on farm diagnostics. It was also concluded that targeted data collection is needed to measure success as well as allowing benchmarking from within the industry. Further debate is still required on if penalties would be implemented for persistent poor performance on farm.

## ***Topic 3: Alternative Approaches to protecting or enhancing Pig Health***

For topic 3 the groups were asked “*What alternative approaches exist to assist in reducing antimicrobial usage?*” Some of the initial responses to this topic for discussion were targeted at some existing alternatives to antimicrobials. Vaccines were a popular choice, but it was recognised that there would also need to be an increase in research and development to improve some of the vaccines currently available or to create new ones. As well as vaccines, alternative medicines, nutraceuticals, pro and prebiotics were considered to be areas which may play an increasing role in the industry, following a reduction in antimicrobial usage. Whilst alternatives to medicines were proposed, the groups recognised a need to go ‘back to basics’ in terms of husbandry and management on farm. This requires: improved biosecurity, disease elimination, on farm diagnostics and skill training to be successful. Further development of these areas was identified as required to accommodate the reduction in use of antimicrobials.

### ***Conclusions from Topic 3***

The conclusions of topic 3 focused around the need to look into further research and development in the field of preventative and alternative medicines. In addition investigations into improving existing management practises, or introducing novel and new technology to accommodate the reduction in antimicrobial use would be of practical benefit.

### ***Topic 4: Strengthening international Collaboration***

The final topic covered ‘*How can we learn and share more effectively with other EU pig industries or sectors?*’ The general consensus throughout the meeting was that the UK pig sector could benefit from looking into what has already been found and implemented in other EU countries. From this the pros and cons of different approaches could be determined and this could then be used to inform the approach that the British pig industry should take. It was considered important that data from other countries was sought to increase the clarity on what targets and objectives should be set, as well as the economic significance of putting the new measures in place. However, any data that is collected from within the UK should be measured by identified parameters, which are comparable with the EU data.

### ***Conclusions from Topic 4***

The conclusions of the final topic were directed at exploring measures already in place across Europe and assessing their viability for the UK sector. By implementing a Europe wide review, it would be possible to assess some of the benefits and drawbacks of the methods which have already been implemented. It would also help to clarify aims and objectives for the UK going forward. Groups did identify the need for best practice to be implemented with users being benchmarked against a national average. This would mean that high users could be identified against the average figure.

### ***Final Conclusions***

The conclusions taken from the round table meeting have now been recorded and are forming the basis of the antimicrobial resistance framework, for the Pig Health and Welfare Council. The framework will then be used to investigate some of the highlighted issues from the workshop, which will help to plan the direction in which the UK pig sector should take in the face of the pressing problem of antimicrobial resistance.