

## NOAH Briefing: Responsible Use of Antibiotics in Cattle:

### Best practice and an evidenced-based approach to macrolide policy and prescribing

#### Current position: *responsible use in the cattle sector*

- The UK Veterinary Antibiotic Resistance and Sales Surveillance Report (UK-VARSS) 2019<sup>1</sup>, published in November 2020, reported that in a sample of 34% of UK dairy cattle, use of 3rd and 4th generation cephalosporins, fluoroquinolones and colistin (classified as EMA Category B<sup>2</sup> (HP-CIA's, WHO)) reduced by 0.73 mg/kg (87%) to 0.11 mg/kg since 2017, and in a sample representing 5.6% of GB beef production, use reduced by 0.86 mg/kg (96%) to 0.04 mg/kg<sup>1</sup>.
- The RUMA Targets Task Force Report 2020<sup>3</sup> also reported significant progress in the cattle sectors against 2017-2020 RUMA targets e.g.:
  - lactating and dry cow tube sales targets achieved early
  - sales EMA Category B antibiotic injectable products were halved
  - standardised antibiotic use metrics and a centralised database were developed
  - widespread training and dissemination of responsible use messages for vets and farmers
  - however, it was noted that further progress was needed on increasing the use of vaccines and teat sealants
- These headline results represent considerable and ongoing efforts right across the food supply chain to implement practical, evidence-based responsible antibiotic use policy e.g.
  - Farm assurance standards such as the Red Tractor Dairy and Beef standards have strict conditions around the use of Category B antibiotics on farm, which can only be used as a last resort and supported by a vet statement<sup>4</sup>.
  - BCVA guidelines state that Category B antibiotics should only be used in exceptional circumstances and prophylactic use to be avoided where possible without compromising welfare<sup>5</sup>.
- The challenge now for the cattle sector is to build on this progress with ongoing improvements in responsible use in the face of endemic disease challenges. Key focus areas will be improving data capture and use, including benchmarking use on-farm, strengthening engagement between the farmer and vet, and on farm interventions through health plans<sup>3</sup>.

#### Challenges: *endemic disease challenges and a responsible approach to prescribing*

- Antibiotics are used to treat a variety of common infections in cattle and fluctuations in the types and amounts of antibiotic used are expected and can occur due to particular disease challenges on farm e.g. due to BRD (Bovine Respiratory Disease), BVD (Bovine viral diarrhoea) or other endemic diseases.

- Farmers, practising vets and industry bodies are responding to these challenges and considering how best to prevent and control disease whilst maintaining the responsible use of antibiotics.
- This relies on a preventative herd health approach in the first instance with strategic use of authorised veterinary medicines to manage and mitigate disease and welfare risks.
- Supply chains, including food retailers and milk purchasers, have a pivotal role to play in implementing policies that reflect current best practice and promote industry recognised approaches in a pre-competitive manner.
- An individual supply chain approach, which prohibits or severely restricts the use of certain EMA Category C 'Caution' antibiotics such as macrolides, risks driving resistance through the greater use of a smaller number of antibiotic classes and restricts the clinical decision making choices available to vets. This hampers responsible use by driving the use of antibiotics that may be less clinically effective in the first instance, leading to longer treatment times and therefore increasing the opportunity and risk of resistance developing.
- Macrolide antibiotics are vitally important as a treatment option for a variety of cattle diseases, e.g. bovine respiratory infections, and they should be available for prescription by veterinary surgeons within the framework of evidenced-based, and responsible use, clinical decision making. Additionally, recent review and analysis recommends that macrolides should be moved from the WHO HP-CIA category to the more appropriate WHO Highly Important Category<sup>6</sup>.

**Best practice: *taking an evidenced-based and pre-competitive supply chain approach***

- Good management practices, effective biosecurity, appropriate housing, nutrition, and veterinary oversight that allows vets to use the tools authorised and available to them, will continue to help drive the responsible use of antibiotics in cattle.
- By taking a science-based and pre-competitive supply chain approach, appropriate measures can be used to help vets and farmers safeguard the health and welfare of their cattle, whilst driving forward the responsible use of antibiotics. The benefits of taking a pre-competitive approach to the responsible use of antibiotics would mean that herds, at local and national level, can access best practice in veterinary care that reflects responsible, evidenced-based prescribing.
- Science-based policies and practices would benefit the health and welfare of all herds such as nationally recognised expert industry guidance. This includes the EMA AMEG advice and categorisation of antibiotics<sup>2</sup>, where antibiotics in Category B 'Restrict' are the fluoroquinolones, 3rd and 4th generation cephalosporins and colistin. Antibiotics in Category C 'Caution' include macrolides, which are a viable treatment option, when prescribed and used responsibly, and in accordance with EMA AMEG advice. This categorisation is recognised by the UK regulator of veterinary medicines, the Veterinary Medicines Directorate (VMD) and used in the UK VARSS Report<sup>1</sup>. It is also followed by RUMA and recognised the Food Industry Initiative on Antimicrobials (FIIA) in their Responsible Use of Antibiotics Policy,<sup>8</sup>. All supply chain policies should support responsible use by clearly acknowledging the farm vet as the final decision-maker for antibiotic prescribing.
- Practising vets, with independent clinical decision making, can directly support the responsible use of antibiotics, deciding on the most appropriate treatments, for each producer and herd. Their role is however hampered when restrictions, that are not based on science, are applied to legally authorised veterinary medicines. Vets with herds under their care need to use their full professional clinical judgement and knowledge of the farm, including considering the need to protect or restore cattle

health and welfare, and to safeguard public health through the responsible use of antibiotics. The choice of antibiotic, taken only by vets, and using the AMEG veterinary decision support tool, allows them to responsibly prescribe the antibiotic they know to be most effective in the first instance, and will reduce the overall use of antibiotics on a farm.

**October 2021**

## **References:**

1. UK Veterinary Antibiotic Resistance and Sales Surveillance Report UK-VARSS 2019: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/950126/UK-VARSS\\_2019\\_Report\\_2020-TPaccessible.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/950126/UK-VARSS_2019_Report_2020-TPaccessible.pdf)
2. EMA AMEG categorisation of antibiotics for use in animals for prudent and responsible use: [www.ema.europa.eu/en/documents/report/infographic-categorisation-antibiotics-use-animals-prudent-responsible-use\\_en.pdf](http://www.ema.europa.eu/en/documents/report/infographic-categorisation-antibiotics-use-animals-prudent-responsible-use_en.pdf)
3. RUMA Targets Task Force Report 2020: [www.ruma.org.uk/wp-content/uploads/2020/11/SO-469-RUMA-REPORT-021220.pdf](http://www.ruma.org.uk/wp-content/uploads/2020/11/SO-469-RUMA-REPORT-021220.pdf)
4. Red Tractor Dairy and Beef/Lamb Standards: [https://assurance.redtractor.org.uk/contentfiles/Farmers-7345.pdf?\\_=637637717657797636](https://assurance.redtractor.org.uk/contentfiles/Farmers-7345.pdf?_=637637717657797636) and [https://assurance.redtractor.org.uk/contentfiles/Farmers-7342.pdf?\\_=637638431439591339](https://assurance.redtractor.org.uk/contentfiles/Farmers-7342.pdf?_=637638431439591339)
5. BCVA and the responsible use of medicines: [www.bcva.org.uk/resources/medicines-public](http://www.bcva.org.uk/resources/medicines-public)
6. Trott et al., Journal of Antimicrobial Chemotherapy, Volume 76, Issue 8, August 2021. [Comparative macrolide use in humans and animals: should macrolides be moved off the World Health Organisation's critically important antimicrobial list?](#)
7. RUMA and AMEG: [www.ruma.org.uk/re-categorisation-of-antimicrobials-proposed-by-emas-ameg/](http://www.ruma.org.uk/re-categorisation-of-antimicrobials-proposed-by-emas-ameg/)
8. FIIA Antibiotic Policy: <https://fiia.co.uk/fiia-policy-on-responsible-use-of-antibiotics/>