

# IMPROVE ANIMAL WELFARE TO ENSURE RESPONSIBLE USE OF ANTIBIOTICS



# REDUCING ANTIBIOTIC MISUSE IN ANIMALS HELPS SAFEGUARD THEM FOR HUMAN HEALTH



Antibiotics are used by human and animal health professionals to treat life-threatening infections. The loss of clinical efficacy of these drugs is becoming an increasing challenge for health systems in the EU. Antimicrobial resistance (AMR) causes 33,000 deaths annually in Europe and if no further action is taken could cause the annual death of 10 million people globally by 2050.<sup>1,2</sup> The use of last-resort antibiotics in European hospitals is increasing<sup>3</sup> and antibiotics that were ruled out for use in humans because of their toxicity are now frequently used to treat resistant bacteria.

The overuse and misuse of antibiotics in both human and animal health contributes to the acceleration of AMR. The main difference is that human treatments are always individual, whereas veterinary treatments can be administered to groups of animals. Evidence shows that increasing animal welfare standards can decrease the need for antibiotics, which can reduce the prevalence of multi-drug resistant bacteria in animals.<sup>4</sup>

The European Commission is updating EU legislation on animal welfare to increase science-based analysis, broaden its scope, and make enforcement easier. This ongoing revision is an opportunity to create a regulatory framework that curbs poor animal welfare practices carried out in intensive farming systems that rely on the use of antibiotics.

The European healthcare sector has a long-standing ambition to support policy advancements that improve animal welfare and support more responsible use of antimicrobials in the EU to reduce the contribution of food supply chains to AMR.

In this position paper, we present policy recommendations that seek to reduce the overuse and misuse of vital antibiotics in European food production by improving animal welfare standards. Many of these antibiotics are vital for human health and must be safeguarded by responsibly reducing their use in animal production.



# CHANGES IN ANIMAL WELFARE TO REDUCE THE NEED OF ANTIBIOTICS

The following recommendations aim to support a reduction in the need and use of antibiotics in food-producing animals.

# 1. REDUCE THE NEED FOR TAIL DOCKING IN PIGLETS

Tail docking (caudectomy) in piglets consists of removing a portion of the tail in the first week after birth to prevent tail biting. This painful process does not fully eliminate the risk of tail biting and can encourage other abnormal behaviours that lead pigs to bite other parts of their body, such as the abdomen.<sup>5</sup> Although routine tail docking has been banned in the EU since 1994, it is still practised routinely in many European countries,<sup>6</sup> despite the consensus among veterinarians to ban this practice.<sup>7</sup>



Tail biting is usually a sign of stress caused by inadequate environmental conditions and management practices that are frequently associated with high antibiotic use.<sup>8</sup> Tail biting can be managed without tail docking, but this requires producers to adapt the production system and improve animal welfare standards in pig farms.<sup>9</sup> By increasing enrichment materials for pigs, making sure that they live in clean and ventilated spaces, and offering adequate diets, the incidence of tail biting can be reduced.<sup>10</sup>

# GOOD PRACTICE: Low rates of tail-docking | Finland

Finland and Sweden are the only EU countries that comply with the regulation banning routine tail-docking in piglets. In Finland, the practice was banned in 2003, which explains the extremely low rate of tail-docked piglets observed there (less than 5% of piglets). Finnish farmers take preventative actions to reduce the risk of tail biting and observe changes in the feeding behaviour of their animals to anticipate an upcoming outbreak.

# **POLICY RECOMMENDATIONS:**

- Require all Member States to submit national action plans for reducing tail docking to properly enforce the existing legislation.
- Establish a transparency mechanism to track the proportion of tail-docked piglets in each EU country.
- Introduce national targets for <5% piglets that have been tail-docked.

# 2. AVOID EARLY WEANING IN PIGLETS

Weaning is the period when piglets transition from milk consumption to other sources of food. Early weaning is a practice of shortening the natural weaning period of piglets, allowing farmers to start the reproductive cycle of the animals more quickly and thus improve the economic efficiency of their farms.13 The transition from a liquid diet to a solid diet is a stressful time for piglets, which often results in the proliferation of E. coli bacteria in the piglet's intestine, associated with postweaning diarrhoea.14 During this period piglets can drastically reduce their feed intake due to weaning stress, meaning they cannot absorb all the nutrients that they need, which makes them more exposed to potential infections.<sup>15</sup> The common use of the antibiotic colistin in pigs to treat diarrhoea caused by intestinal infections is known to have increased the spread and development of AMR.<sup>16</sup>

Colistin is used in humans to treat gram negative bacteria that are resistant to carbapenems and can lead to pneumonia, bloodstream infections, and wound or surgical site infections in healthcare settings. Resistance in carbapenem-resistant E. coli bacteria has significantly increased from 2016 to 2020 in the EU, which is likely to further escalate the demand for colistin in European hospitals, whilst its use has already increased by 67% between 2011-2020 due to the increase of resistant bacteria to other antibiotics.<sup>17</sup>

According to current EU legislation, weaning in piglets should begin no earlier than 21 days after birth. Weaning piglets before 25 days, however, increases the risk of infection, especially when prophylactic treatment<sup>a</sup> is restricted, which is currently the case in the EU.<sup>18</sup> The restriction on the use of antibiotics enacted by the new Veterinary Medicinal Products Regulation and the ban on the use of zinc oxide, which was a common alternative to antibiotics, will reduce the number of treatments available for piglets and will therefore be detrimental to pig health if not accompanied by other measures to promote animal welfare, such as later weaning.

# **GOOD PRACTICE:**

Longer weaning periods | Sweden















LATER WEANING
DRASTICALLY REDUCES
THE RISKS OF POSTWEANING DIARRHOEA
AND THEREFORE THE NEED
FOR ANTIBIOTICS.<sup>19</sup>

## **POLICY RECOMMENDATION:**

 Establish a new legally-binding minimum weaning period for piglets between 25 and 35 days of age.

# 3. SELECTIVE BREEDING IN BROILER CHICKENS

The vast majority (90%) of broiler chickens<sup>b</sup> sold in the EU come from intensive livestock farming, a system that favours the rearing of fast-growing breeds of animals.<sup>20</sup> <sup>21</sup> In the EU, the average slaughter age for broilers is 38-40 days of age.<sup>22</sup> Fast-growing breeds of broiler chickens are associated with higher antibiotic use. In The Netherlands, farms rearing fast-growing breeds use 27% more antibiotics.<sup>23</sup> This is mainly because these birds have lower activity levels, poorer indicators of mobility, poorer foot and hock health, higher biochemical markers of muscle damage, and potentially inadequate organ development.<sup>24</sup> Many fast-growing broilers spend the last days before slaughter sitting or lying down because their legs can no longer support their body weight.<sup>22</sup>

Fluoroquinolones are a class of antibiotics frequently used in group treatment in the EU poultry sector, even if there is evidence that the use of fluoroquinolones in food production contributes to fluoroquinolone resistance in human Campylobacter infections, such as gastroenteritis.<sup>25</sup>

# GOOD PRACTICE: Slow-growing breeds | France

France is one of the largest producers of organic broiler meat in the EU, accounting for 35% of broilers. A key factor in France's success is the Label Rouge initiative. France's national certification encourages improved production standards for all food products, including broiler chickens. Poultry producers accredited under this label rear slow growing breeds indoors in low-density with access to outdoors and slaughter them at older ages.

# **POLICY RECOMMENDATION:**

 Introduce a legally-binding 56-day minimum slaughter age for broilers.

# 4. IMPROVE HYGIENIC CONDITIONS

Overcrowding and poor hygienic housing conditions are commonly associated with increased respiratory and gastrointestinal problems in food-producing animals.

These factors contribute to increased antibiotic consumption.<sup>27</sup> Poor hygienic conditions are more frequent in intensive production systems and affect all kinds of livestock. In Europe, it is still common for some food-producing animals to be kept indoors all their lives.<sup>28</sup>

The poultry production sector is especially concerning when it comes to the lack of space and poor hygienic conditions. Current European legislation allows a maximum stocking density of 42kg of animals per square metre but these standards cannot guarantee that animals are able to move freely, let alone have access to an outdoor run. Organic standards set a maximum stocking density of 21kg/m² for turkeys and poultry, with access to an outdoor run. Extensive indoor chickens are reared in a density of 25kg/m² in the EU, which can prevent the rapid spread of infectious diseases throughout the flock.<sup>29</sup>



<sup>&</sup>lt;sup>b</sup> A broiler is a chicken bred specifically for meat production

### **GOOD PRACTICE:**

# Reduced stocking density | Austria

In Austria, only 3% of total farmed animals are kept in cages.<sup>30</sup> This country is at the forefront of regulations aiming at reducing stocking density, with a maximum stocking density for broilers of 30kg/m<sup>2</sup> set in 2017. Other animal welfare improvements include the banning of enriched cages for laying hens and cages for rabbits, and the restriction to 10 days of the time in sow stalls (gestation crate).

# **POLICY RECOMMENDATIONS:**

- Provide food-producing animals with housing that allow them to move freely.
- Phase out cages for farmed animals, e.g. laying hens, sows, calves, rabbits, pullets, layer breeders, broiler breeders, quail, ducks, and geese.
- Reduce the maximum stocking density for broiler chickens to 25kg/m².
- Introduce open or transparent areas with natural daylight in housing where animals do not have access to the outdoors.
- Require natural or mechanical ventilation systems in animal housing.
- Provide animals with appropriate enrichment materials, e.g. straw, wood, rope, that should be changed at least 2-3 times per week.

# 5. CONTROLLING ANIMAL WELFARE IN EU FARMS

In Europe, there are quality standard accreditation systems for food products. This is the case for organic products, which are eligible for Organic agriculture Europe certification.

To qualify for this certification, producers must be assessed by a certification body approved by the competent authorities. If the assessment is successful, they are entitled to add the certificate to their products and market them as organic in the EU.

Although this certificate has animal welfare indicators, it is only awarded to organisations that comply with the requirements of organic production. This means that non-organic animal products sold in the EU do not undergo this type of assessment to certify their animal welfare standards. Currently, there is no EU animal welfare label, a tool that would allow consumers to check the animal welfare standards of products they want to buy.

# GOOD PRACTICE: RSPCA Assured labelling | UK

RSPCA Assured is a labelling scheme dedicated to improving welfare standards for farm animals in the UK. Introduced in 1994, the standards offer a number of welfare benefits relative to standard industry practice. The scheme covers both indoor and outdoor rearing systems and ensures that greater space, bedding and enrichment materials are provided. RSPCA Assured has a reach of 30% of pig production in the UK.<sup>31</sup>

# **POLICY RECOMMENDATIONS:**

- Introduce an EU-wide animal welfare label.
   This label should be applied to all products of animal origin and based on broad animal welfare criteria, including requirements on animal transport and slaughter. The animal welfare label should be mandatory for all types of food production, including intensive farming.
- Require Member States to provide the number of farms using the animal welfare label and their main type of production.
   This will allow the European Commission to publish comprehensive yearly reports to track progress of each Member States in achieving high animal welfare standards.
- Assess farms as a whole, not at the level of individual animals, to maximise the impact of this label as farms can only qualify if all their production meets the requirements.



### REFERENCES

- 1. ECDC (2019) Antimicrobial Resistance Tackling the Burden in the European Union.
- www.oecd.org/health/health-systems/AMR-Tackling-the-Burden-in-the-EU-OECD-ECDC-Briefing-Note-2019.pdf
- 2. Review on Antimicrobial Resistance (2016) Tackling drug-resistant infections globally: final report and recommendations. www.amr-review.org/sites/default/files/160525\_Final%20paper\_with%20cover.pdf
- 3. OECD (2022) Antimicrobial Resistance in the EU/EEA A One Health Response.
- www.oecd.org/health/Antimicrobial-Resistance-in-the-EU-EEA-A-One-Health-Response-March-2022.pdf
- 4. World Animal Protection (2020) Fuelling the Pandemic Crisis: Factory farming and the rise of superbugs. www.worldanimalprotection.ca/our-work/animals-farming/factory-farming-and-the-rise-of-superbugs
- 5. Di Martino G. et al. (2014). The effect of tail docking on the welfare of pigs housed under challenging conditions. www.sciencedirect.com/science/article/abs/pii/S187114131400599X
- 6. De Bryine et al. (2018) Phasing out pig tail docking in the EU present state, challenges and possibilities. www.porcinehealthmanagement.biomedcentral.com/articles/10.1186/s40813-018-0103-8
- 7. FVE, EAPHM. (2019) Position on preventing tail docking and tail biting.
- www.fve.org/fve-eaphm-position-on-preventing-tail-docking-and-tail-biting/
- 8. EPHA. (2022) Ending routine farm antibiotic use in Europe.
- www.epha.org/wp-content/uploads/2022/02/report-ending-routine-farm-antibiotic-use-in-europe-final-2022.pdf
- 9. Valros, A., Heinonen, M. (2015) Save the pig tail.
- https://porcinehealthmanagement.biomedcentral.com/articles/10.1186/2055-5660-1-2
- 10. European Commission. (2018) Cutting the need for tail-docking.
- https://food.ec.europa.eu/system/files/2019-05/aw\_practice\_farm\_pigs\_tail-docking\_eng.pdf
- 11. European Commission. (2020) Answer given by Ms Kyriakides on behalf of the European Commission.
- https://www.europarl.europa.eu/doceo/document/E-9-2020-002862-ASW\_EN.pd
- 12. FareWellDock. (2017) FareWellDoc executive summary. www.farewelldock.eu/farewelldock-executive-summary/
- 13. Johnson, A. et al. (2012) How Does Weaning Age Affect the Welfare of the Nursery Pig?
- /www.porkgateway.org/resource/how-does-weaning-age-affect-the-welfare-of-the-nursery-pig
- 14. Rhouma, M. et al. (2017) Post weaning diarrhea in pigs: risk factors and non-colistin-based control strategies. https://actavetscand.biomedcentral.com/articles/10.1186/s13028-017-0299-7
- 15. Xiong, X. et al. (2019) Nutritional Intervention for the Intestinal Development and Health of Weaned Pigs. www.ncbi.nlm.nih.gov/pmc/articles/PMC6393345/
- 16. Nordmann, P. et al. (2016) Plasmid-mediated colistin resistance: an additional antibiotic resistance menace. https://pubmed.ncbi.nlm.nih.gov/27021419/
- 17. ECDC. (2022) Antimicrobial resistance in the EU/EEA (EARS-Net) Annual Epidemiological Report for 2020. www.ecdc.europa.eu/en/publications-data/antimicrobial-resistance-eueea-ears-net-annual-epidemiological-report-2020
- 18. Edwards, S.A. et al. (2020) Weaning age and its long-term influence on health and performance.
- https://www.wageningenacademic.com/doi/10.3920/978-90-8686-894-0\_9
- 19. Sjolund et al. (2016) Quantitative and qualitative antimicrobial usage patterns in farrow-to-finish pig herds in Belgium, France, Germany and Sweden. https://pubmed.ncbi.nlm.nih.gov/27435645/
- 20. Compassion in Food Business. (2020) Chicken meat production data.
- www.compassioninfoodbusiness.com/ media/5819738/chicken-meat-production-in-the-eu.pdf
- 21. Compassion in World Farming. (2019) The life of: broiler chickens.
- www.ciwf.org.uk/media/5235306/The-life-of-Broiler-chickens.pdf
- 22. European Parliament. (2019) The EU poultry meat and egg sector.
- www.europarl.europa.eu/RegData/etudes/IDAN/2019/644195/EPRS\_IDA(2019)644195\_EN.pdf
- 23. Jacobs, L. et al. (2020) The welfare of broiler chickens in the EU.
- www.eurogroupforanimals.org/files/eurogroupforanimals/2020-11/2020\_11\_19\_eurogroup\_for\_animals\_broiler\_report.pd
- 24. Torrey, S. et al. (2020) In Pursuit Of A Better Broiler: A Comprehensive Study On 16 Strains Of Broiler Chickens Differing In Growth Rates. <a href="https://www.globalanimalpartnership.org/wp-content/uploads/2020/09/Better\_Chicken\_Project\_Summary\_Report\_Global\_Animal\_Partnership.pdf">https://www.globalanimalpartnership.org/wp-content/uploads/2020/09/Better\_Chicken\_Project\_Summary\_Report\_Global\_Animal\_Partnership.pdf</a>
- 25. Alliance to Save Our Antibiotics. (2016) Why the use of fluoroquinolone antibiotics in poultry should be banned. https://saveourantibiotics.org/media/1495/why-the-use-of-fluoroquinolone-antibiotics-in-poultry-must-be-banned-alliance-to-save-our-antibiotics-iuly-2016.pdf
- 26. INAO. (2016) Le Label Rouge. www.inao.gouv.fr/Les-signes-officiels-de-la-qualite-et-de-l-origine-SIQO/Label-Rouge
- 27. EPHA. (2022) Ending routine farm antibiotic use in Europe.
- www.epha.org/wp-content/uploads/2022/02/report-ending-routine-farm-antibiotic-use-in-europe-final-2022.pdf
- 28. Alliance to Save our Antibiotics. (2021) Antibiotic use in organic farming; Lowering use through good husbandry. www.saveourantibiotics.org/media/1914/20210406\_antibiotic\_use\_in\_organic\_farming.pdf
- 29. European Commission. (2008) Laying down detailed rules for the application of Council Regulation (EC) No 1234/2007 as regards the marketing standards for poultry meat. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32008R0543
- 30. CIWF (2021) How close are we to a cage free Europe? www.endthecageage.eu/how-close-are-we-to-a-cage-free-europe
- 31. CIWF. (2019) Know your labels. www.ciwf.org.uk/your-food/know-your-labels





HCWH Europe Rue de la Pépinière 1, 1000 Brussels, Belgium

E. europe@hcwh.org T. +32 2503 4911

- **y** @HCWHEurope
- **f** HCWHEurope
- In Health Care Without Harm Europe

noharm-europe.org

# **PHOTO CREDITS**

Serbogachuk (cover), Maria\_Sbytova (p. 2), sijiaw (p. 2), pixabay (p. 3), Farm Transparency Project (p. 3), ligora (p. 5)

### **AUTHOR:**

Erik Ruiz, Safer Pharma Project Officer

**PUBLISHED**October 2022

**DESIGN** 

Blush Design Agency



Funded by the European Union. Views and opinions expressed are however those of Health Care Without Harm (HCWH) Europe only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor CINEA can be held responsible for them.