Factsheet

on the appeal "Preserve the most important antibiotics – stronger regulation in animal husbandry!"

General health threat from antimicrobial resistance (AMR)[i]

- 670,000 people in the EU become ill each year from infections caused by antibiotic-resistant pathogens, 33,000 people die from them.
- The burden of infections with antibiotic-resistant bacteria in the European population is comparable to that of influenza, tuberculosis and HIV/AIDS combined.
- Forecasted annual deaths from AMR by 2050: 390,000 in Europe, 10 million globally = more than the projected number of deaths from cancer and diabetes combined.

What role does industrial animal husbandry play?[ii]

- High-performance breeding (animals particularly susceptible to disease) and intensive husbandry practices (incl. large groups and flocks, stress, etc.) lead to high and regular antibiotic use and increased resistance rates.
- Highly problematic: individual feed and water intake cannot be checked when animals are treated in groups, inaccurate dosages are risked. Underdosing: pathogens can develop repellent properties, ultimately resistance.
- The transmission of resistance from animals to humans can occur in several ways:
    1. via the environment: exhaust air from animal houses and spread;
    2. via the products such as mainly meat, but also raw milk;
    3. via direct contact with the animals.
- Antibiotic resistance from livestock farming is a global problem: meat exports from the EU also export resistant pathogens to other countries. This often includes countries with weaker healthcare systems. Conversely, we also import meat products to Europe from countries with lower production standards and higher resistance rates.

Consumption of antimicrobial agents (especially antibiotics) in the EU and Germany[iii]

Year	EU (31 european countries)		Germany	
	Humans	Food providing animals	Humans	Animals
2018	4,263 t	6,358 t	-	722 t
	in mg/PCU*:			
	133.3 mg/kg	104.6 mg/kg	65.3 mg/kg	88.4 mg/kg
	Animals: Norway: 2.9 mg/kg, Sweden: 12.5 mg/kg, Denmark: 38.2 mg/kg, Netherlands: 57.5 mg/kg			
2019	Not reported yet		339 t	670 t (2020: 701 t)

* For better comparability for different animal species and reporting countries, the unit mg/PCU (Population Correction Unit = 1 kg biomass of food-producing animals or 1 kg total body weight of the population) is used for antibiotic use in addition to the figure in tons. **Note: the human lifespan is significantly longer than that of animals (means: significantly more animal individuals).**

Note: Antibiotic use in veterinary medicine has tended to decrease over the last ten years. However, a shorter period of observation shows rather stagnation; for individual antibiotics and countries, use is increasing again. Previous efforts to reduce antibiotic consumption appear to be exhausted. Necessary: drastic improvement of animal breeding and husbandry, including a significant reduction of groups and herds.

Consumption levels of main antibiotics/reserve antibiotics (CIA HP)[iv]

- EU 2018: CIA HP = 14% of total antibiotics for food-producing animals.
- Germany 2019: 130.7 t CIA HP = 20% of the total antibiotics dispensed to veterinary medicine.

Info: According to the WHO, the "highest priority critically important antimicrobials" (HPCIA or CIA HP) are to be given the highest priority in the global containment of resistance. The WHO explicitly recommends that CIA HP should no longer be used in food-producing animals.

Current resistance situation[v]

- ECDC and EFSA: "*Infections with foodborne bacteria are increasingly difficult to treat*" (2020) and "*resistance remains high among bacteria causing foodborne infections*" (2021).
- European Court of Auditors (2019): Antimicrobial resistance in the animal sector remains a challenge as a health threat for the EU.
- Germany: BVL refers to "*Occurrence of resistance in bacterial isolates from the broiler, fattening turkey and fattening pig food chains*" (2020) and "*fattening pigs, fattening calves and young cattle as well as from tank milk and fresh beef*" (2019) – reference to various multidrug-resistant germs and, among other things, recommendation to reduce the use of CIA HP.

Resistance to CIA HP:

- EU: widespread resistance to ciprofloxacin (fluoroquinolones) as well as resistance also to cephalosporins, macrolides as well as polymyxins, in some countries also co-resistance to specifically ciprofloxacin and erythromycin (macrolides).
- The threatening situation is also repeatedly highlighted by surveys of civil society organizations.

Highly alarming: pathogens such as Salmonella or Campylobacter, which very often cause infections in humans, are already showing resistance to the antibiotics that are actually used to treat them. A large proportion of salmonella bacteria are even already multi-resistant.

More info and sources:
www.germanwatch.org/en/antibiotics-appeal

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[i] OECD (2019): Antimicrobial resistance. Tackling the burden in the European Union, p. 10; ECDC (2018): Infographic: Antibiotic resistance – an increasing threat to human health; AMR Review (2016): TACKLING DRUG-RESISTANT INFECTIONS GLOBALLY: FINAL REPORT AND RECOMMENDATIONS, p. 11.

[ii] Benning, R./Striezel, A. (2021): Recherche zu Reserveantibiotika bei Tieren, die der Lebensmittelgewinnung dienen – Reserveantibiotika als Metaphylaxe und Gruppenbehandlung verzichtbar; BVL n.d.: Antibiotikaresistenzen bei Lebensmittel liefernden Tieren; FAO (2016): Drivers, dynamics and epidemiology of antimicrobial resistance in animal production; Germanwatch e. V. (2019): Über Antibiotikaresistenzen, ihre Ursachen und Reduktionsstrategien in der Tierhaltung (author: R. Benning); UBA (2018): Antibiotika und Antibiotikaresistenzen in der Umwelt. Hintergrund, Herausforderungen und Handlungsoptionen (Antibiotics and Antibiotic Resistances in the Environment. Background, Challenges and Options for Action).

[iii] ECDC/EFSA/EMA (2021): Antimicrobial consumption and resistance in bacteria from humans and animals: Third joint inter-agency report on integrated analysis of antimicrobial agent consumption and occurrence of antimicrobial resistance in bacteria from humans and food-producing animals in the EU/EEA, JIACRA III 2016–2018; EMA (2020): Sales of veterinary antimicrobial agents in 31 European countries in 2018, Trends from 2010 to 2018, Tenth ESVAC report; Wallmann, J. et al. (2019): Abgabemengenerfassung von Antibiotika in Deutschland 2018, in: Deutsches Tierärzteblatt 67 (8), p. 1082 ff. ; WldO (2020): Jedes zweite verordnete Antibiotikum ist ein Reservemedikament.

[iv] CIA HP: Cephalosporine (3. and higher gen.), Chinolone incl. Fluorchinolone, Glykopeptide, Makrolide and Ketolide, Polymyxine (Colistin); EMA (2020): Sales of veterinary antimicrobial agents in 31 European countries in 2018, Trends from 2010 to 2018, Tenth ESVAC report; Wallmann, J. et al. (2020): Abgabemengenerfassung von Antibiotika in Deutschland 2019, in: Deutsches Tierärzteblatt 68 (9), p. 1102 ff.; WHO (2017): WHO guidelines on use of medically important antimicrobials in food-producing animals.

[v] BVL (2020/2021): Zoonosen-Monitoring 2019 u. Zoonosen-Monitoring 2020; ECDC (2020): Antimicrobial resistance in the EU: infections with foodborne bacteria becoming harder to treat; EFSA (2021): Resistance levels still high in bacteria causing foodborne infections; EFSA/ECDC (2021): The European Union Summary Report on Antimicrobial Resistance in zoonotic and indicator bacteria from humans, animals and food in 2018/2019; EuRH (2019): Bekämpfung der Antibiotikaresistenz: trotz Fortschritten im Tiersektor stellt diese Gesundheitsbedrohung für die EU nach wie vor eine Herausforderung dar.

STOP THE SUPERBUG!
ANTIBIOTICS ARE FOR SAVING LIVES
NOT FOR HIDING MEAT INDUSTRY PROBLEMS