



## Editorial

# Antimicrobial resistance: The Silent Pandemic Brewing in Our Food Systems

Antimicrobial resistance (AMR) is often called the silent pandemic. But there is nothing quiet about the numbers. By 2050, World Health Organization (WHO) already predicted that AMR could jeopardize the food supply of over two billion people. Healthcare costs could rise by USD 159 billion annually. These are not distant forecasts. They are alarms to alert us based on disturbing facts. A major driver of this crisis sits right on our farms. The imprudent use of medically important antibiotics in food-producing animals is accelerating resistance at an alarming pace.

WHO has already published list of Medically Important Antimicrobials that classified the antibiotics into different classes. Consider this: approximately 80% of medically important antibiotics are consumed in the animal sector. Fun fact is that consumption of these drugs is happening at tens of thousands of tonnes each year. Much of this use is not for treating sick animals. It is for growth promotion and disease prevention in healthy ones. Antibiotics not only help produce more meat and milk but they also introduce selection pressure for resistant bacteria.

These bacteria do not stay on the farm. They move from farms to human population via animal products, contaminated water and soil. Through direct contact. And when they reach, the drugs we rely on for serious infections stop working.

The problem is especially acute with drugs classified as "highest priority critically important antimicrobials" for human medicine. Take colistin as a case. It is a last-resort antibiotic for multidrug-resistant Gram-negative infections in humans. Yet in many countries, its use in animals remains poorly restricted. Farms use it freely often to prevent

infections that may never occur. This is not just imprudent. It is reckless use of antimicrobials and we cannot afford this. WHO strongly recommends an overall reduction in the use of all medically important antibiotics in food animals. Complete restriction for growth promotion and non-diagnosed prevention is the goal. The European Union banned growth-promoting antibiotics back in 2006. Netherlands sets an example and has achieved lowest possible use of antimicrobials in dairy farming. But it took around 40 years of consistent implementation. Other regions are following but progress remains uneven.

What is the way forward? Better hygiene, improved vaccination, smarter housing, and herd management are the alternatives. Studies show that restricting antibiotic use in food animals can reduce resistant bacteria by up to 39%. That is a meaningful difference. We also need strict surveillance and robust monitoring of antimicrobial use and resistance in food animals. Without data, we cannot formulate evidence-informed policy.

The message is simple. We cannot keep using human medicines in animals like they are candy. The drugs that save lives in hospitals are the same ones being squandered on farms. Prudent use is not optional anymore. It is must for survival. Otherwise, we have to live as our forefathers were living in pre-Penicillin era. The clock is ticking and the bacteria are winning this war.

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