



PRESS RELEASE

Alarming levels of Antibiotic Resistance found in the poultry environment

A new study finds high levels of Resistance Genes against medically important antibiotics in the Poultry Environment.

16th April 2024, New Delhi: A collaborative research report “Poultry’s pill problem; Antibiotics and its environmental concern” released by Toxics Link and World Animal Protection found high levels of Antimicrobial Resistance Genes (ARG) in 11 out of 14 samples collected from poultry farms across the states of Tamil Nadu and Andhra Pradesh.

The study analysed 14 poultry litter and groundwater samples from the above-mentioned 6 poultry farms indicating an alarming presence of ARGs against 15 important antibiotics, including glycopeptides, carbapenems, and macrolides.

Toxics Link also conducted both offline and online surveys which found that poultry farmers are using antibiotics indiscriminately due to a general lack of awareness and understanding of the possible consequences. Despite the recommendation of the Bureau of Indian Standards to not use Antibiotic Growth Promoters (AGPs) in poultry feeds, these continue to be available in the markets and used by poultry farmers. Incidentally, Colistin, a last-resort antibiotic drug for treating multidrug-resistant infections, banned for use in food-producing animals by the Union Ministry of Health in 2019, is still being sold through online platforms.

ARGs are genetic facilitators of AMR which causes bacteria, viruses, fungi and parasites to no longer respond to antimicrobial medicines. Although naturally occurring, ARGs in the environment have increased in recent years due to anthropogenic activities leading to overuse and misuse of antimicrobials across different sectors. This has led to diseases such as pneumonia, gonorrhoea, post-operative infections, HIV, tuberculosis, and malaria becoming increasingly untreatable. According to the World Health Organization (WHO), at least seven lakh people die each year due to drug-resistant diseases, including more than two lakh people who die from multidrug-resistant tuberculosis.

India accounts for 3% of the global consumption of antimicrobials in food animals and has one of the highest Intensity of Antimicrobial Usage (AMU) rates in the livestock sector. As the country intensifies its animal farming practices to meet food insecurity, there are growing concerns about the poultry sector emerging as a new hotspot for Antimicrobial Resistance

(AMR). AMR can spread through various routes, including contact with animals or their products and contaminated food, thereby increasing the risk of infection for veterinarians, farmers, and food handlers. Even waste from poultry farms, such as litter used as fertilizer in agriculture or feed in aquaculture, can cause the spread of AMR across different sectors.

Gajendra Sharma from World Animal Protection elaborates - “Poor animal husbandry practices, especially in poultry farming, significantly contributed to antibiotic overuse. Farmers often administer antibiotics preventatively and for disease treatment, resulting in high levels of antibiotic residues in both food products and waste. Addressing the root cause of antibiotic misuse in the animal farming sector especially poultry is critical for controlling and reducing AMR. World Animal Protection strongly advocates for the effective integration and implementation of animal welfare into National and State Action plans to combat AMR. The time to act is now to safeguard the health and welfare of animals, humans, and the planet”

In 2015, the World Health Assembly adopted a global action plan on antimicrobial resistance to optimise antimicrobial use, increase awareness, reduce the incidence of infections, and build sustainable practices that align with the reduction in overall antimicrobial use. Consequently, India also developed its own Action Plan on AMR in 2017 emphasising building surveillance networks to control the use of antibiotics across sectors.

According to **Dr Vijay Pal Singh, Principal Technical Officer at CSIR-IGIB and Associate Professor at ASIR**, “the findings of the current study provide evidence of antibiotic use in poultry and its role in increasing trends of AMR. I suggest there is a need to work closely with all stakeholders and to develop sound protocols and control measures for arresting this trend of AMR.”

Satish Sinha, Associate Director of Toxics Link, says of this study,” India is highly vulnerable to risk related to AMR and there is a need to revisit the implementation of National Action Plan. The country needs to identify potential hot spots, set up robust monitoring and surveillance systems to restrict the overuse of antibiotics across all sectors and adopt environmentally sound waste and effluent management practices.

Key highlights of the research study are given below:

1. The number of ARGs identified varied from 7,914 to 1,592 genes.
2. Manure samples in Coimbatore contained the highest amount of ARGs compared to both samples in Vijayawada (borewell samples and manure).
3. **Multidrug Resistance Genes constituted 25%-45%** of all the ARGs isolated in the samples, followed by Glycopeptide, Peptide, Tetracycline, Aminoglycoside and Macrolides.
4. Identified ARGs were against fifteen antimicrobials listed under the New WHO's List of Medically Important Antimicrobials, three of which were Carbapenems, Glycopeptide and Mupirocin-like antimicrobials.

5. **Bacteria pathogenic to both humans and poultry, *Escherichia coli* and *Klebsiella pneumoniae***, were found in manure samples, raising concern over the development of drug-resistant zoonotic pathogens.

Survey findings

1. Poultry feeds available to the farmers are **unregulated and unlabelled**.
2. Farmers were largely **unaware of the risk related to AMR, the withdrawal period** and the guidelines provided by the pollution control board concerning poultry establishment.
3. **Critically Important Antimicrobials promoted for growth promotion were found in online retail shops**, despite the recommendations and regulations against them, e.g. Tylosin.
4. Colistin, banned for use in animals in 2018, is still being sold as a growth promoter in online retail shops for animal products.

About us:

Toxics Link

Toxics Link is a Delhi-based environmental research and advocacy organization set up in 1996, engaged in disseminating information to help strengthen the campaign against toxic pollution, provide cleaner alternatives and bring together groups and people affected by this problem.

Toxics Link has unique expertise in areas of hazardous, medical and municipal wastes, international waste trade, and the emerging issues of pesticides, Persistent Organic Pollutants (POPs), hazardous heavy metal contamination etc. from the environment and public health point of view. We have successfully implemented various best practices and have brought in policy changes in the aforementioned areas apart from creating awareness among several stakeholder groups.

World Animal Protection

World Animal Protection has moved the world to protect animals for over 55 years. With offices in 13 countries, we work to give animals a better life. The organization's activities include working with companies to ensure high standards of welfare for the animals in their care; working with governments and other stakeholders to prevent wild animals from being cruelly traded, trapped, or killed; and working for the better treatment of farmed animals.

Through research, advocacy, and public awareness campaigns, World Animal Protection strives to foster a world where animals are treated with compassion & dignity, and their needs are integrated into all aspects of human life aiming towards a future where animals are valued and protected.

For more information please contact:

Piyush Mohapatra
Sr. Program Coordinator, Toxics Link
Email: piyush@toxicslink.org
Phone: +91 9873453242

Gajender Kumar Sharma
Country Director, World Animal Protection (India)
Email: GajenderKSharma@worldanimalprotection.org.in
Phone: +91 9313333283

Vidhi Mathur
Sr. Program Officer, Toxics Link
Email: vidhi@toxicslink.org
Phone: +91 7588475946

Surbhi Chopra
Sr. Campaign Officer, World Animal Protection
Email: Surbhichopra@worldanimalprotection.org.in
Phone: +91 9615272727

