

Sustainable Animal Health Management in Rural India

Mains: *GS III – Economics of Animal-Rearing*

Why in News?

Recently, unchecked antibiotic use in rural livestock has accelerated antimicrobial resistance (AMR).

What is the relationship between AMR and rural livestock?

- **Commercialized livestock system** – The rising demand for animal products such as milk, eggs, meat, and other derivatives has led to a more commercialised livestock system.
- **Misuse of antibiotics** – In the process of livestock commercialization, the overuse and misuse of antibiotics have become common, whether for disease prevention or to enhance production.
- **Undermining veterinary consultations** – Antibiotics are frequently administered without veterinary consultation or proper diagnosis, often based merely on visible symptoms.
- Consequently, incomplete courses, overdosing, or the use of inappropriate medicines are common.
- As a result, pathogenic microorganisms develop resistance to these drugs.
- **Effects of resistant microbes** – These resistant microbes pose serious threats not only to animal health but also to human health, while simultaneously contaminating the food chain and the environment.
- Thus, antimicrobial resistance (AMR) has emerged as a One Health issue — linking the health of animals, humans, and the environment.

World Antimicrobial Awareness Week (WAAW) 2025 will take place from November 18 to 24, 2025, which is aimed to increase awareness of global antimicrobial resistance (AMR) and to encourage best practices

What are the major challenges in rural India?

- **Weak animal health infrastructure** – In rural areas, trained para-veterinarians or *Pashu Sakhis / Pashu Salah Karmis* are few in number.
- Government veterinarians often serve multiple villages and veterinary centres simultaneously.
- Due to the lack of immediate medical support, farmers frequently self-medicate their

animals or rely on local drug sellers, especially for small livestock such as goats and poultry.

- **Inadequate awareness** - Farmers generally lack sufficient awareness regarding the proper use of antibiotics — their effects, side effects, correct dosage, and the withdrawal period (the time required before milk or meat can be safely consumed).
- **Market pressure** - Milk cooperatives, private companies (including medicine suppliers), and individual buyers tend to emphasise quantity over quality. This market pressure often pushes farmers — knowingly or unknowingly — to use additional drugs to restore animal health quickly and increase productivity.
- **Lack of surveillance and data** - AMR surveillance in India's veterinary sector is extremely limited.
- There is no systematic mechanism for regular data collection and analysis from rural areas, making it difficult to assess the scale and pattern of antibiotic resistance in livestock.

What are some positive initiatives and pathways for solutions?

- **Community-Based Animal Health Management** - Organisations such as the Aga Khan Rural Support Programme (India) have expanded access to animal health services at the village level through the *Pashu Sakhi* model.
- These locally trained women assist farmers in vaccination, parasite control, and basic animal care — including housing, feeding, health, marketing, and management.
- This approach reduces unnecessary drug use and strengthens preventive health measures.
- **Awareness and Training** - Regular training sessions should be organised for farmers, livestock advisors, and paravets.
- Awareness can also be promoted through banners and wall paintings highlighting the responsible use of antibiotics, biosecurity, and hygiene practices.
- **Promotion of Preventive Measures** - Preventive initiatives such as vaccination, improved nutrition, selective breeding, clean water, and hygienic animal housing help reduce the risk of infection and, consequently, the dependence on drugs.
- **Strengthening Policy and Regulatory Frameworks** - Strict controls should be enforced on the sale of antimicrobial drugs without prescription, along with monitoring of the veterinary drug supply chain and vaccination cold chain.
- State animal husbandry departments should also prepare local action plans aligned with the National Action Plan on AMR.
- **Data-Based Monitoring** - In collaboration with veterinary colleges, laboratories, and community organisations, a *Rural AMR Surveillance Network* can be developed to track infections and drug usage at the grassroots level.
- Livestock in India is not merely a source of livelihood but also the foundation of nutritional security and social stability, particularly in rural and remote regions.

What lies ahead?

- The path to solutions lies in community participation, policy support, and local innovation.
- Prioritising awareness and responsible animal health management in rural India will

not only help control AMR but also pave the way for a healthy and sustainable livestock system.

- If these measures are adopted to control AMR, not only will animal health improve, but farmers' wellbeing will also benefit, and the overall cost of livestock rearing will decline.
- Healthy animals will yield higher and more consistent production, leading to stable income. Moreover, livestock-related ecosystems will become more sustainable and secure.

Reference

[Down To Earth| Sustainable Animal Health Management](#)

