

# **Food Animal Production: Innovative approaches and alternative to antimicrobials**

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Department of Animal Husbandry and Dairying (DAHD)  
INDIA

# Challenges

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- **Regulated use** of antibiotics (human as well as veterinary sector)
- Use of antibiotics as **growth promoters**
- **Enforcement of regulations** (Schedule H-1/Schedule X for human use and regulations including prescription sale norms)
- **Disposals & effluent treatment** by pharma industry, hospitals
- **Interaction** among clinicians & laboratory experts, Veterinarians, environmentalists & collaborative research
- **Co-ordination** with different departments w.r.to proper data collection on usage and surveillance
- **Routine tests** of animal feed for MRL & use of probiotics, prebiotics, essential oils, enzymes

# Challenges (2)

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- Awareness and proper knowledge on “farm to fork” AMR gene transmission pathway
- IEC on AMU and AMC (Farmers, animal handlers, vets and consumers including big commercial units)
- Biosecurity of animal farms with proper hygiene and sanitation
- Optimize newer protocols for fixing MRLs in Processed Foods, Which should include pesticide residue levels at various stages of processing.
- Doorstep delivery of Veterinary services
- Treatment by unspecialized person in the field and hesitation of using alternative preparations by veterinarians
- Funding

# Innovative Approach

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An **MoU between DAHD and Ministry of AYUSH**, to introduce the concept of Ayurveda and its allied disciplines into veterinary science. This would also help rationalize the use of drugs, especially antibiotics, and thereby stall the emergence of antimicrobial resistance (AMR).



Encourage use of **ethno-veterinary medicine** One Health approach (oral preparation, topical application, wound management, repellents etc.)



Motivate farmers and commercial farms to use **herbal preparation** as digestive tonics, boosting immunity etc.)



**Monitoring** of finished products for MRLs and marketing permissions



**Training and awareness** on biosecurity and hygiene to prevent infections



**Mobile veterinary units** introduced for treatment, disease control and awareness



**Safe and scientific disposal** of human and animal waste and animal carcass