Containing Antimicrobial Resistance (AMR) in Poultry Sector: What Needs to be done in India and States

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Poultry Population in India: 2012 and 2019

- **Total Poultry**: 729.21 million (2012) vs. 851.81 million (2019)
- **Backyard Poultry**: 217.49 million (2012) vs. 317.07 million (2019)
- **Commercial Poultry**: 511.72 million (2012) vs. 534.74 million (2019)

20th Livestock Census, AH Dept.; GOI (Vikaspedia)
Poultry Population in Major States of India: 2012 and 2019

[Bar chart showing poultry population in major states of India for 2012 and 2019]

Food Systems Dialogue India-2023

20th Livestock Census, AH Dept.; GOI (Vikaspedia)
Poultry Meat Consumption per Capita in India

Source: Faostat

Last Updated: October 29, 2023
No. of eggs produced across India
## Antibiotics use in animals' settings

<table>
<thead>
<tr>
<th>Therapeutic Use</th>
<th>Metaphylaxis</th>
<th>Prophylaxis</th>
<th>Growth Promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration of antimicrobials to animals when diagnosed with infectious disease</td>
<td>Administration of antimicrobials to animals when perceived to be in contact with animals diagnosed with disease</td>
<td>Mass administration of antimicrobials to animals to prevent disease when risk is established</td>
<td>Administration of antimicrobials to animals to boost feed efficiency and increase weight gain</td>
</tr>
</tbody>
</table>
Non-therapeutic Antibiotics use

• Use of antibiotics growth promoters (AGP) in animal feeds at sub-therapeutic level concentrations to maintain intestinal microbial balance that increases growth performance and feed efficiency.
• Sub-therapeutic levels of antibiotics also reduce bacterial virulent factors, increase the susceptibility of bacteria to host’s immune system.
• Pro-inflammatory response poor growth performance.
• Antibiotics with anti-inflammatory activity reduces inflammation.
• Tropical climatic conditions Spread of infectious diseases.
• Poor Biosecurity in farms.
However, use of antimicrobial agents for growth promotion is reported to be no longer a practice in three quarters of participants in OIE/WOAH report.

Courtesy: OIE/WOAH 7th Annual report on antimicrobials, 2022
Initiatives at Central and State Govt. levels to Contain AMR

• ICAR-FAO coordinated Indian Network for Fisheries and Animals Antimicrobial resistance (INFAAR) was launched in 2017 for execution at different veterinary/Animal health institutions in India for AMR surveillance.

• Indo-Dutch pilot project on AMR under One Health in Krishna District of Andhra Pradesh was completed between 2020 to 2021, where *E.coli* isolated form in poultry cloacal swabs were tested for AMR surveillance.

• On lines with the National Action plan on AMR till today four states *viz.* Kerala, Madhya Pradesh, Delhi and Andhra Pradesh launched their state action plans for containment of AMR.

• Govt. of India prohibited the use of Colistin and its formulations for food producing animals, poultry, aqua farming and feed supplements by Gazette notification in 2019. State Govts. adopted the same.
(G.O.Ms.No.27, AHDD&F(AH.I) Department, Dated:10-06-2021)

Andhra Pradesh Animal Feed
(Regulation of Manufacture, Quality Control, Sale and Distribution) Rules, 2021

CHAPTER-III

MINIMUM STANDARDS & SPECIFICATIONS AND EXPERT COMMITTEE

9. The Standards of Animal Feed:-

1. Animal feed sold or intended to be sold in the State shall comply with the BIS Quality Standards/Standards prescribed as under Section 13 of the Act.
2. The minimum standards and specifications for various animal feeds and mineral mixture are appended in Annexure-II to the Rules.
3. The Animal feed shall not contain any prohibited antibiotic or pharmacologically active substances under any circumstances and shall be certified accordingly on every animal feed bag.

GOVERNMENT OF ANDHRA PRADESH

ABSTRACT


ANIMAL HUSBANDRY DAIRY DEVELOPMENT & FISHERIES (AH.I) DEPARTMENT

Andhra Pradesh Action Plan for Containment of AMR (APAPCAR)

GOVERNMENT OF ANDHRA PRADESH

ABSTRACT

HM&FW Department - State Action plan on Anti Microbial Resistance (AMR) - Approved - Orders - Issued.

HEALTH MEDICAL AND FAMILY WELFARE (I.1) DEPARTMENT

G.O.Ms.No.148

Dated: 27.06.2022

GOVERNMENT OF ANDHRA PRADESH

ABSTRACT

Health, Medical & Family Welfare Department - State action plan on Anti Microbial Resistance (AMR) approved - Constituting State Anti Microbial Resistance Cell - Orders - Issued.

HEALTH MEDICAL AND FAMILY WELFARE (I.1) DEPARTMENT

G.O.Ms.No.03

Dated: 04.01.2023

Read the following.

ANIMAL HUSBANDRY DEPARTMENT

DIRECTORATE OF ANIMAL HUSBANDRY, AP, VIKAYAWADA

Proc.Roc.No. AHF02-32031/21/2021-EPID SEC-DAH, DT: 04.05.2023

AMR in Poultry

Animal Health
Animal Welfare
Economies
Livelihoods
Public Health

Key Challenges

Awareness in public
Prudent use
Cross resistance
Effective alternatives
Cost effectiveness
Economical farm biosecurity
Reducing the dependence on Antibiotics

• Improved vaccination, especially thrust on vaccines with locally isolated strains/serotypes as vaccine candidates and new generation vaccines.

• Supplementation of poultry feed/water with natural compounds with proven antimicrobial and anti-inflammatory activities. (Thymol and Carvacrol are widely used in A.P. poultry farms).

• Digital solutions for farm management to track growth of the flocks, to monitor the behaviour and to regulate the environment, with set reminders.

• Improved cost-effective biosecurity measures with less use of disinfectants, to the possible extent.

• Farm waste/droppings treatment with microbial inoculants to degrade AMR genes.