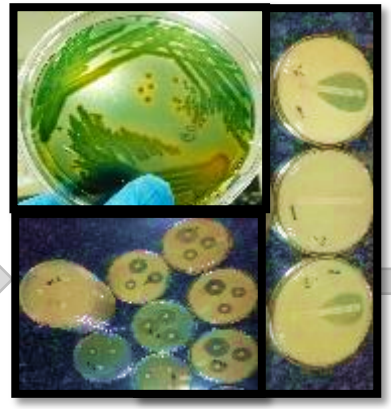
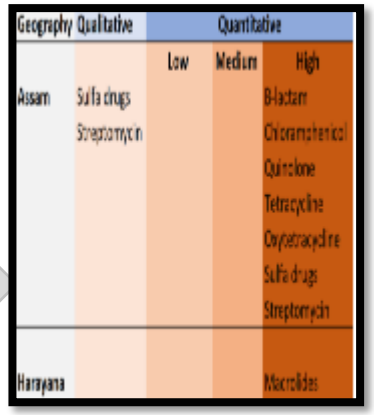
Antimicrobial residues and resistant bacteria from dairy and poultry value chains in India

Jan 2019 – Dec 2020

Dairy milk and poultry was sampled.



The samples were screened for resistant bacteria.



Residues in samples were tested by LC-MS/MS technique

Photos by Tushar

Objectives

1. To understand the use of antimicrobials at the state and farm level in the dairy and poultry sector.
2. To identify and characterize antimicrobial-resistant bacteria.
3. 3. Qualitative and quantitative screening of dairy milk and poultry samples for presence for of antimicrobial residues.

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Partners: Consortium with partners from Indian Council of Agricultural Research, Food Safety & Standard Authority of India.

Funding: ILRI

Highlight of 2020 achievements

On screening of the cattle milk sample, there was high incidence of methicillin resistance in *Staphylococcus* isolated from organized dairy sector, it harbored both *mecA* and *mecC* resistant genes.

The isolated *E.coli, Klebsiella, Shigella* were found tit was has also shown to produce *ESBL*, *MBL* and *AmpC* producers.

The draft genome for *Staphylococcus* harboring *mecC* gene is completed and submitted to NCBI.

Residue of B-lactam, chloramphenicol, quinolone, tetracycline and Oxytetracycline, sulfa drugs and streptomycin was higher in unorganized dairy sector whereas macrolides was higher in organized sector.

Pamphlets on mastitis and AMR was prepared on the eve of antibiotic awareness week.

1. Pamphlets on Mastitis

2. Pamphlets on AMR

3. Interventions on AMR

4. BSL2+ lab Ligi, Johanna, Rajeswari, Tushar