

# Antimicrobial Use Patterns in Broiler & Sonali Poultry Production in Chattogram, Bangladesh

Shariful Islam<sup>1</sup>, Saima Akter<sup>1</sup>, Fatema Jannat<sup>1</sup>, Md. Helal Uddin<sup>1</sup>, Pangkaj Kumar Dhar<sup>1</sup>, Tahia Ahmed<sup>1</sup>, Keya Ghosh<sup>1</sup>, Md. Abu Shoieb Mohsin<sup>1</sup>, Rashed Mahmud<sup>1</sup>, Paritosh Kumar<sup>1</sup> Guillaume Fournié<sup>2</sup> and Md. Ahasanul Hoque<sup>1</sup>

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## Introduction

- ❑ The poultry industry in Bangladesh is a major contributor to the economy (BSB, 2020).
- ❑ 28% of Bangladeshi households raise chicken as their main animal (FAO, 2022).
- ❑ Overuse of antibiotics is leading to antimicrobial resistance (AMR) development (Chowdhury et al., 2022).

## Objectives

- ❑ Quantitatively and qualitatively estimate the use of antibiotics, with a view toward uncovering patterns and potential areas for intervention.
- ❑ Investigate the purpose for which antibiotics are being used.

## Methodology



**Study Period:** (December 2022 to July 2023) and the number of farms surveyed (45 Broiler, 15 Sonali – All male farmers)



**Study Area:** Mirsharai and Chandonaish sub-districts in Chattogram (50km away from CVASU)



**Eligibility criteria for selecting farms:** Exotic Broiler or Sonali chickens with at least 500 birds, both credit-based and contracted



**Farm selection:** Random sampling for contracted farms & probability-proportional-to-size cluster sampling for credit-based farms

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## Methodology (Contd.)



**Data Collection:** Mixed-methods approach with questionnaires, daily phone calls, and three-time farm visits (First visit – day 12 to 15, Second visit – day 28 or before selling the birds, and third visit – after selling the birds)



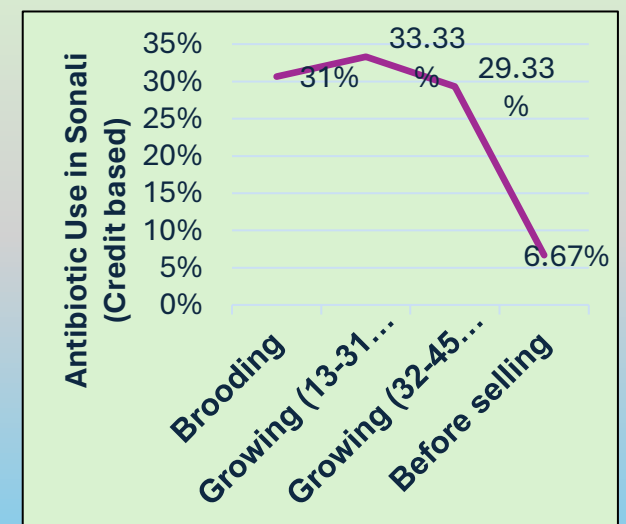
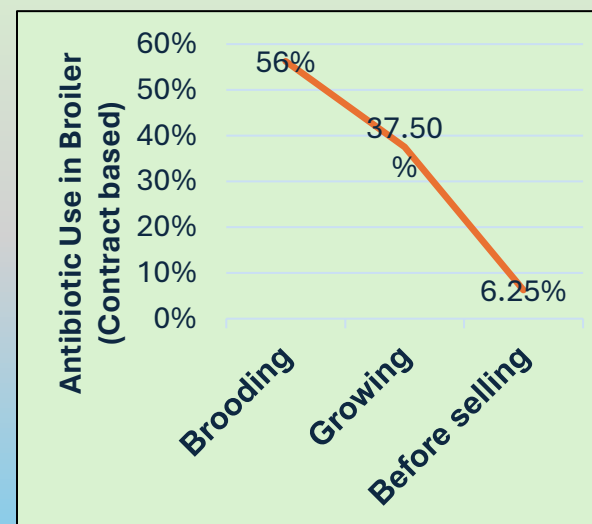
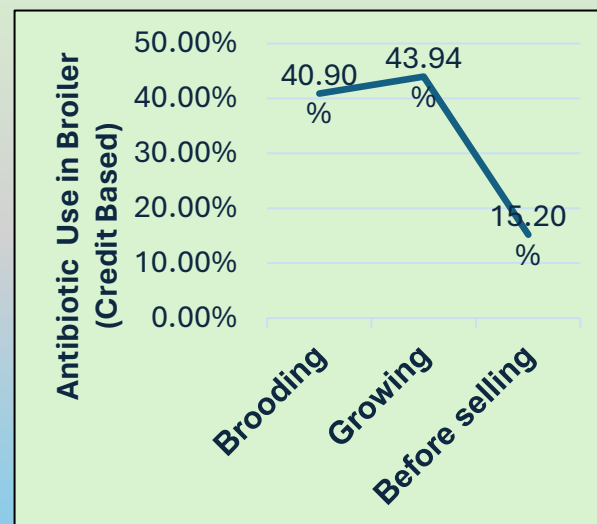
**Type of data:** Antibiotic use, non-antibiotic use, purpose of use, mortality, water consumption



**Data Analysis & tools:** Quantitative and qualitative analysis using STATA Corp – 18 and MS Excel

## Results

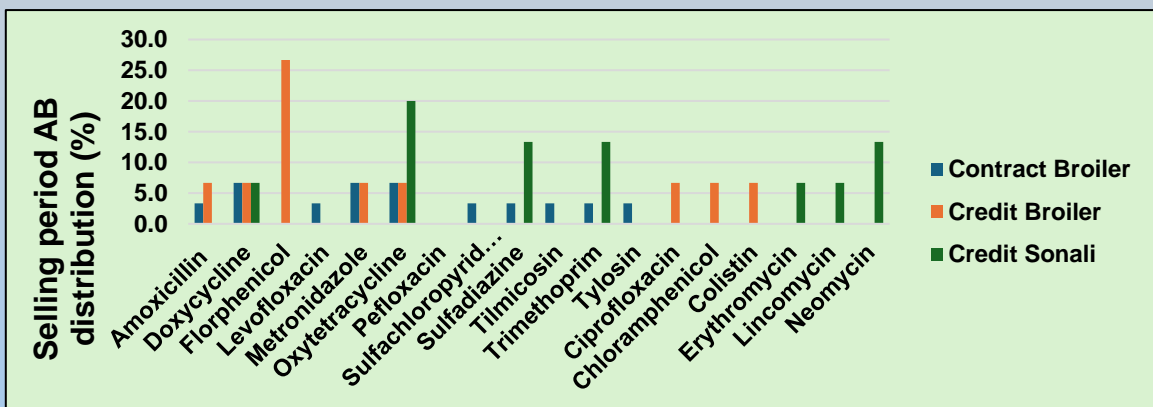
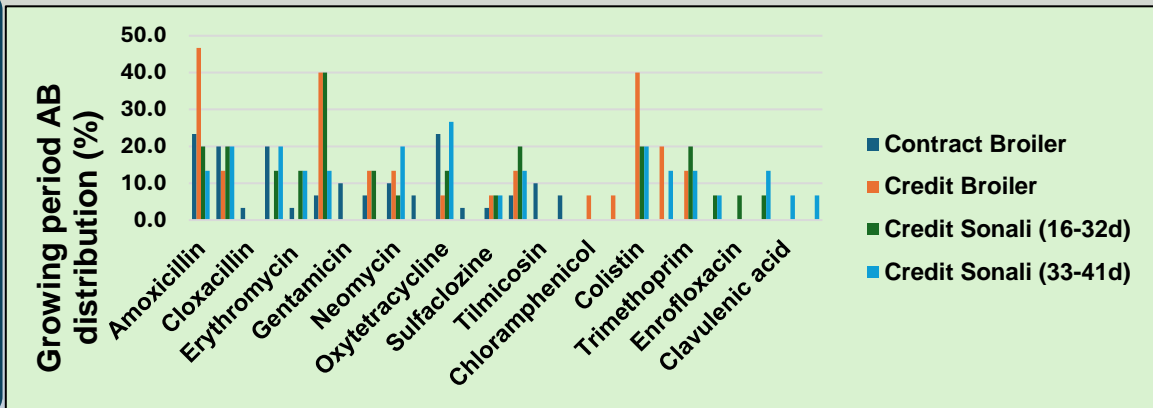
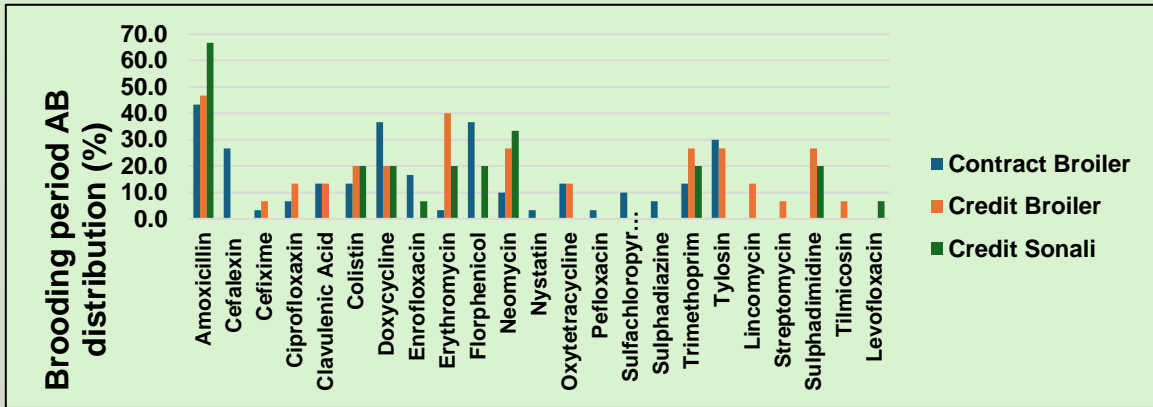
About 133 treatment courses (median 4; IQR 5.6-4.4) were observed



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Result (Cont.)



## Conclusion & Recommendations

- ❑ Interventions focused on encouraging the responsible use of antimicrobials in animal agriculture.
- ❑ Raise awareness among farmers and other stakeholders about the danger of antibiotic overuse.
- ❑ Emphasis on biosecurity as preventive measures rather than treatment.

## References

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- Chowdhury, S. et al., (2022). Antibiotic usage practices and its drivers in commercial chicken production in Bangladesh.
- FAO. 2022. Food and Agriculture Organization of the United Nations. Bangladesh – Shocks, agricultural livelihoods and food security: Monitoring report, January 2022.

## Acknowledgement

