A longitudinal epidemiological investigation on poultry pathogens and farm biosecurity standard in broiler and Sonali chicken production in Chattogram, Bangladesh

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Introduction

❖ The poultry industry has proliferated in recent years, but several reasons have slowed this sector's expansion, with diseases and poor farm biosecurity, as well as high input prices being the main obstacles (M. M. Rahman, 2015).

❖ A variety of diseases cause about 30% of mortality annually in poultry of Bangladesh (Hamid, M. A. et al, 2017).

❖ Many earlier studies on poultry disease investigation (Koh et al., 2022) and biosecurity status (Høg et al., 2019) are based on cross-sectional studies.

❖ There is a lack of information about more risk at one production time or how the mortality evolves when infection occurs.
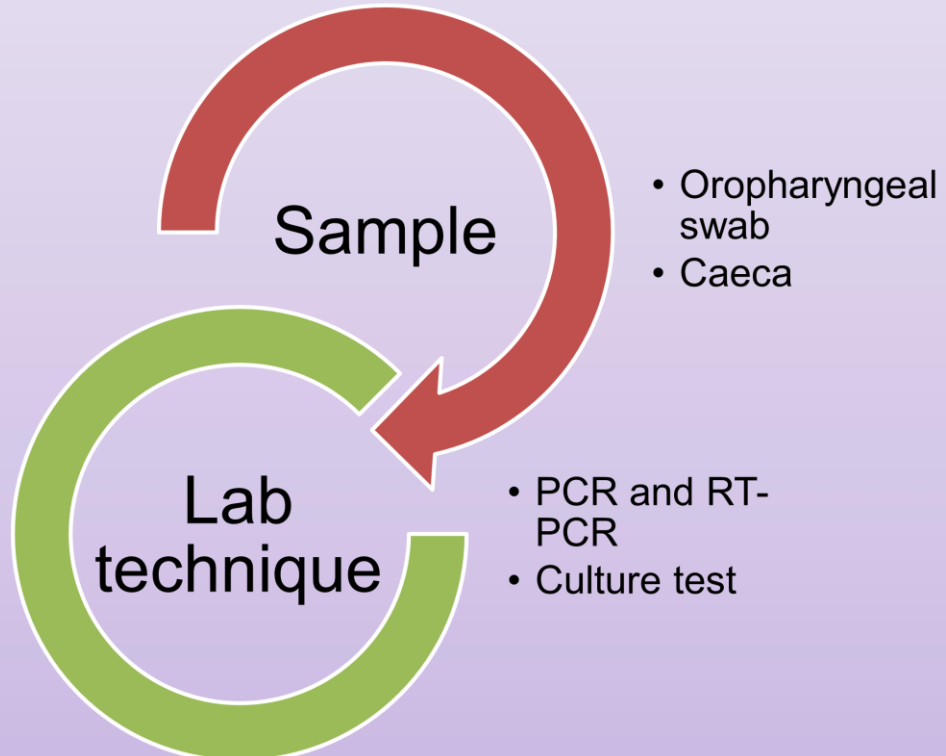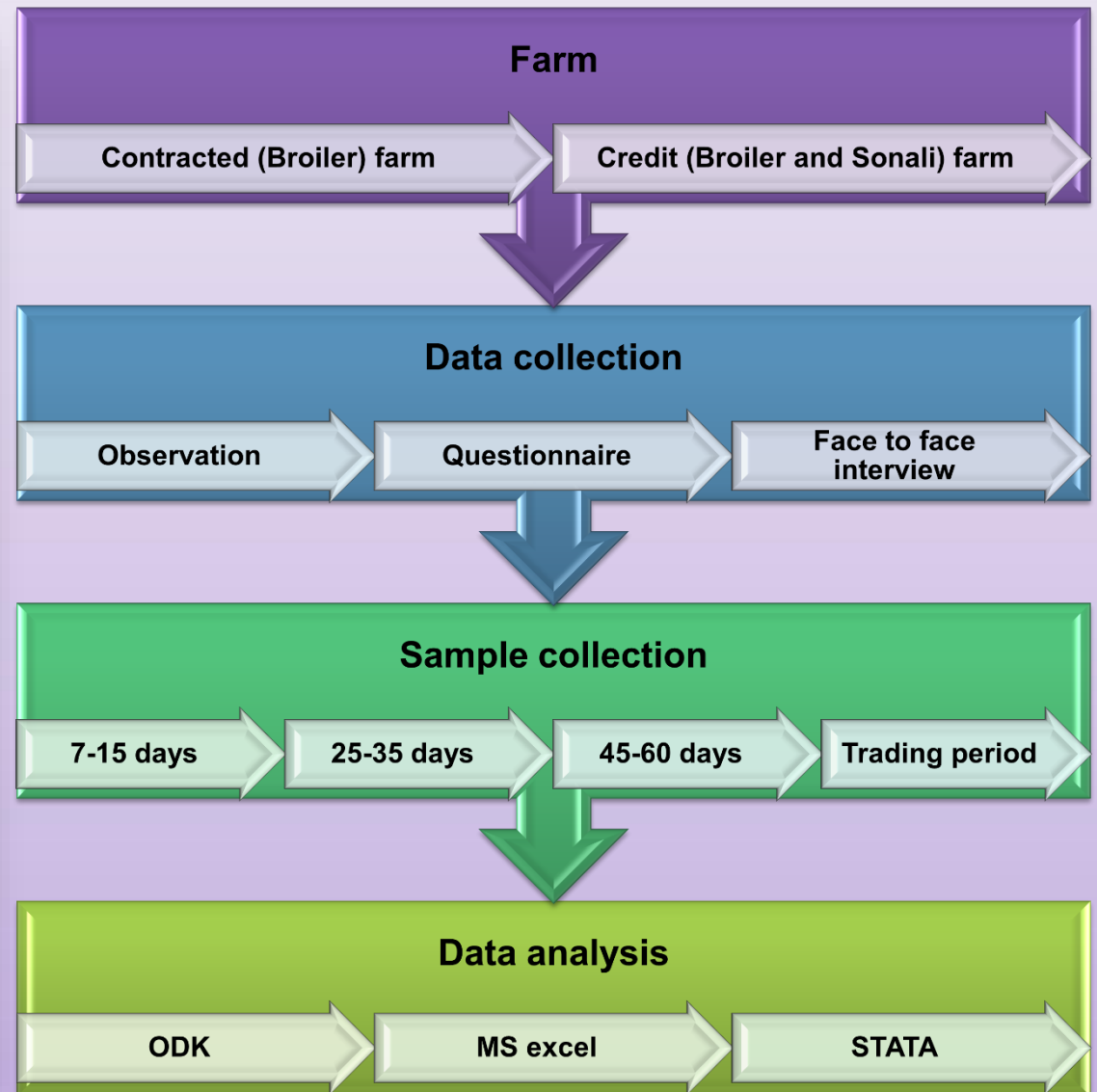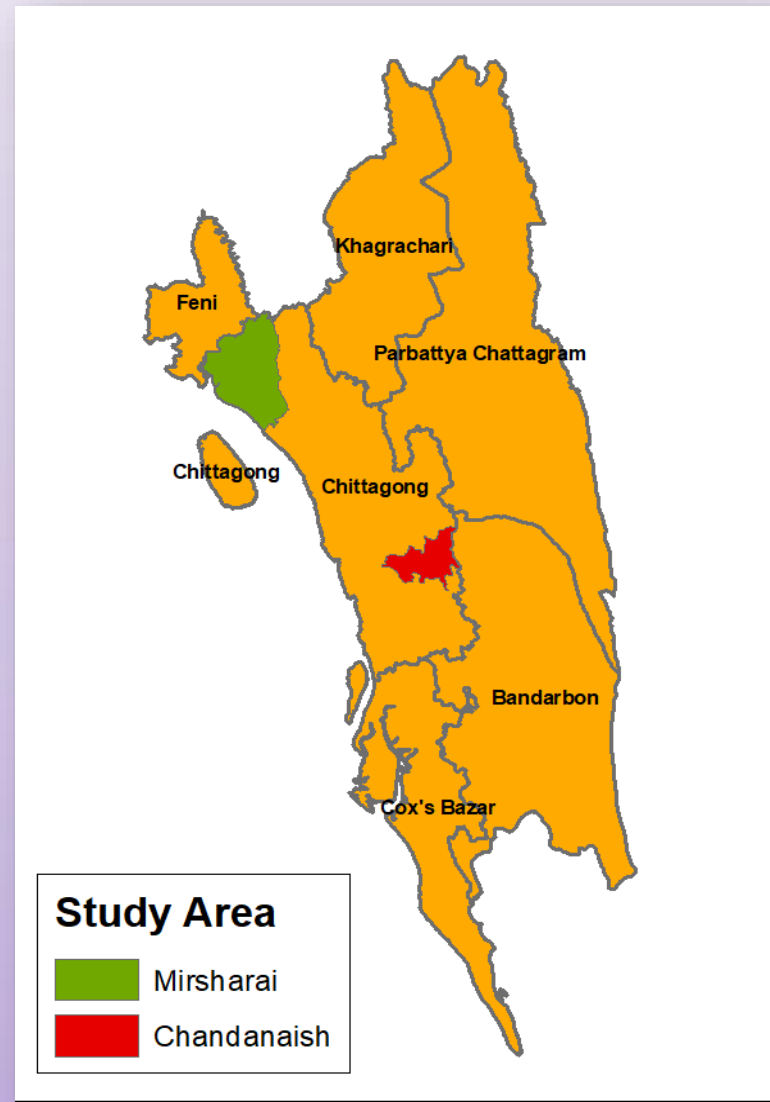
Methodology

Sample collection

Data collection

Study Area
- Mirsharai
- Chandanaish

Farm
- Contracted (Broiler) farm
- Credit (Broiler and Sonali) farm

Data collection
- Observation
- Questionnaire
- Face to face interview

Sample collection
- 7-15 days
- 25-35 days
- 45-60 days
- Trading period

Data analysis
- ODK
- MS excel
- STATA

Sample
- Oropharyngeal swab
- Caeca

Lab technique
- PCR and RT-PCR
- Culture test
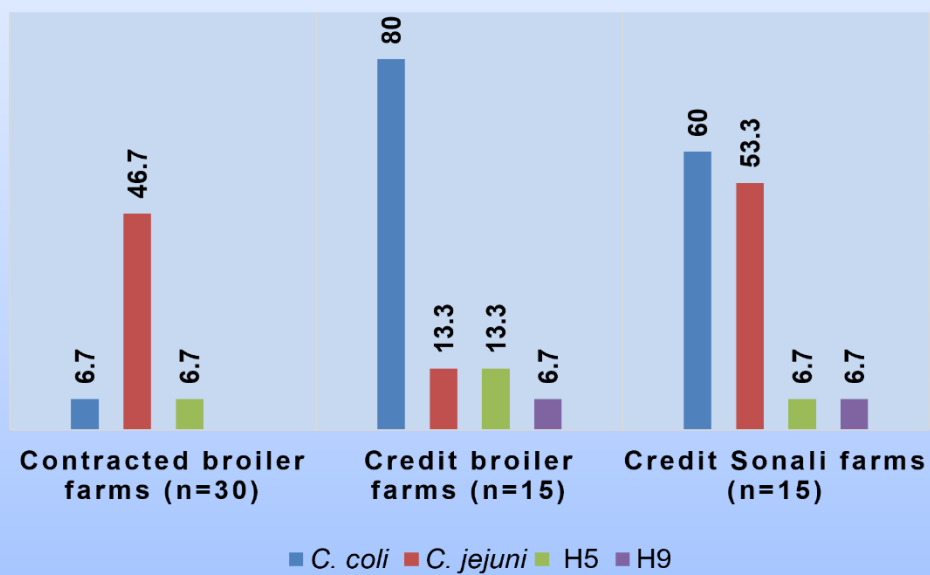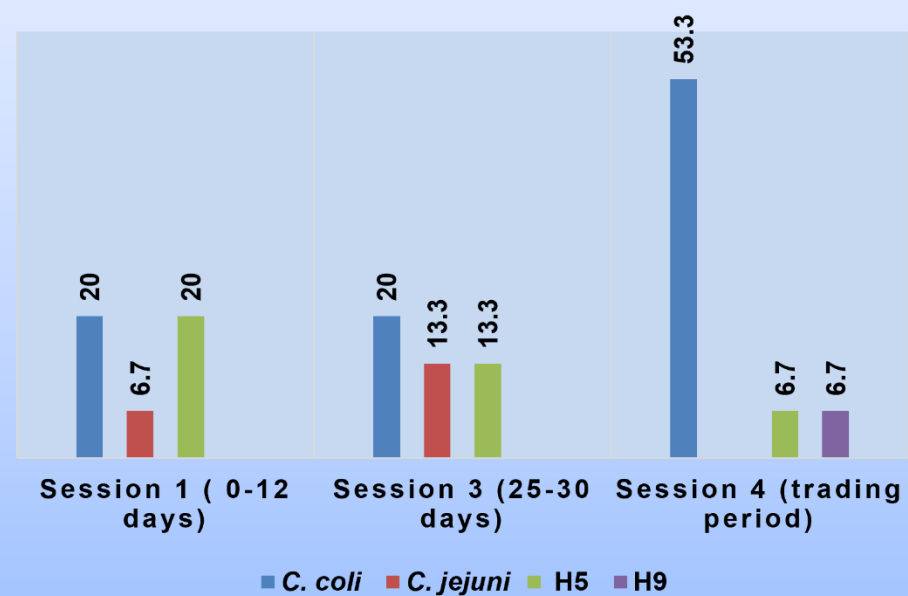
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Conclusion

- Incidence of *C. coli* is higher than *C. jejuni*
- Incidence of H5 subtype of AIV is noticeable at farm level
- Entry period of birds and trading period is high risk zone of poultry pathogens
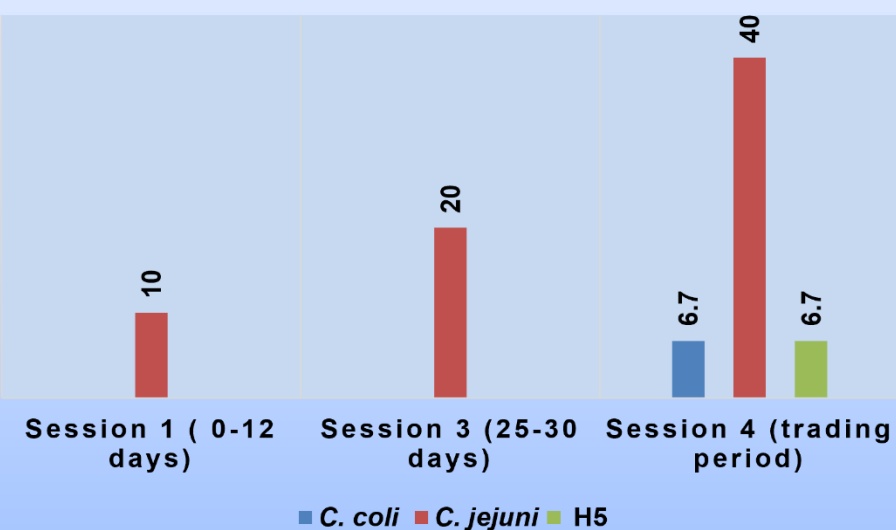
Result

Overall Prevalence (%) of Pathogens

Prevalence (%) of Credit Broiler Farm

Prevalence(%) of Contracted Broiler Farm

Prevalence(%) of Credit Sonali Farm

Recommendation

- ❖ Initiate training program for farmers on farm level disease management.
- ❖ Implement an intervention system for high-risk entry points of disease at farm level.
- ❖ Include other poultry types and geographical regions in Chattogram or Bangladesh for a broader picture.
- ❖ Collect poultry and environmental samples more frequently to capture the dynamic nature of pathogen transmission

Reference

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