Determinants of exotic chick morbidity and mortality Kept in small-scale commercial chicken farms in Bahir Dar, Northwest Ethiopia

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ABSTRACT

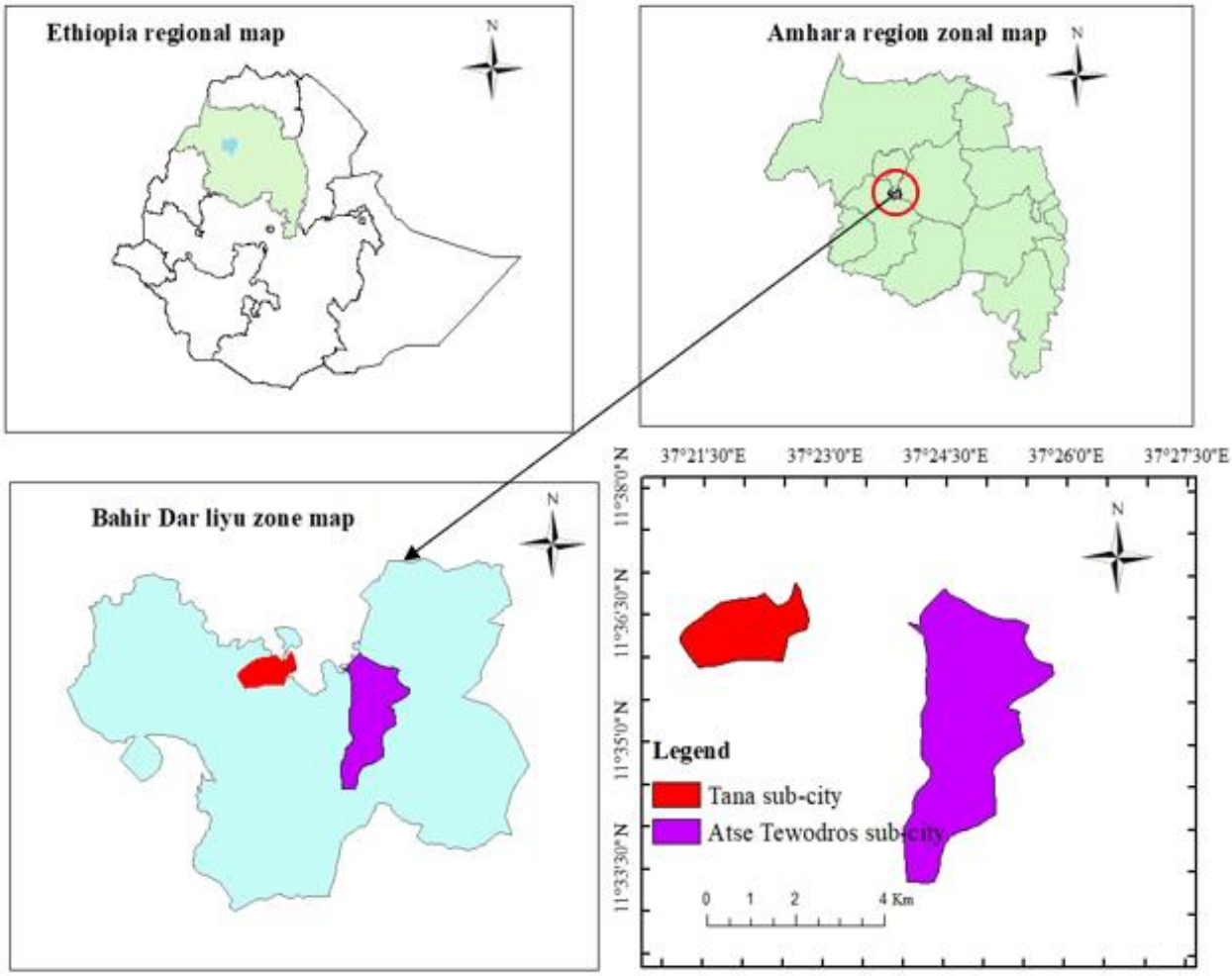
A longitudinal study was conducted on exotic chicks 'morbidity and mortality in small-scale chicken farms in Bahir Dar, Ethiopia. A total of 10006 from day-old to 45 days old exotic chicks from five small-scale farms were monitored for clinical health problems. Data on potential risk factors were collected using personal observations, postmortem examination, and laboratory analysis. Survival analysis was employed to model the presumed explanatory variables. The overall crude exotic chicken morbidity and mortality risk rates were 6.58% and 6.4%, respectively. The incidence and risk rate of chicken diseases were spraddling leg (15.08%, 0.99%), cannibalism (7.54%, 0.51%), ascites (6.77%, 0.46%), omphalitis (4.77%, 0.32%), avian salmonellosis (2.46%, 0.19%), avian mycoplasmosis (1.08%, 0.10%), respectively. Among the risk factors investigated, the experience of an attendant (HR= 2.45, P ≤ 0.001), source of day-old chick (HR= 2.64, P ≤ 0.001), attendant (HR= 0.41, P ≤ 0.001), and breed (HR= 2.35, P≤ 0.001) were found significantly associated with the incidence of crude morbidity and mortality. "Avian salmonellosis and avian Mycoplasma galisepeticum 30.7% and 14.8%, respectively, were confirmed based on serological tests. In conclusion, the morbidity rate and mortality rate of chicks were found to be higher than the economically tolerable level. Therefore, it is advised that further interventions be made against the identified pathogens and risk factors for chicks' morbidity and mortality that have been discovered.

Keywords:

INTRODUCTION

MATERIALS AND METHODS

Study area description



Selection of study farms

Study population and sampling technique

Study design

Data collection method

Mycoplasma gallisepticum

Data management and analysis

Survival analysis and investigation of risk factors

RESULTS AND DISCUSSION

Chick morbidity and mortality

Risk factors

** ref = reference, yrs. = Years HR = hazard rate*

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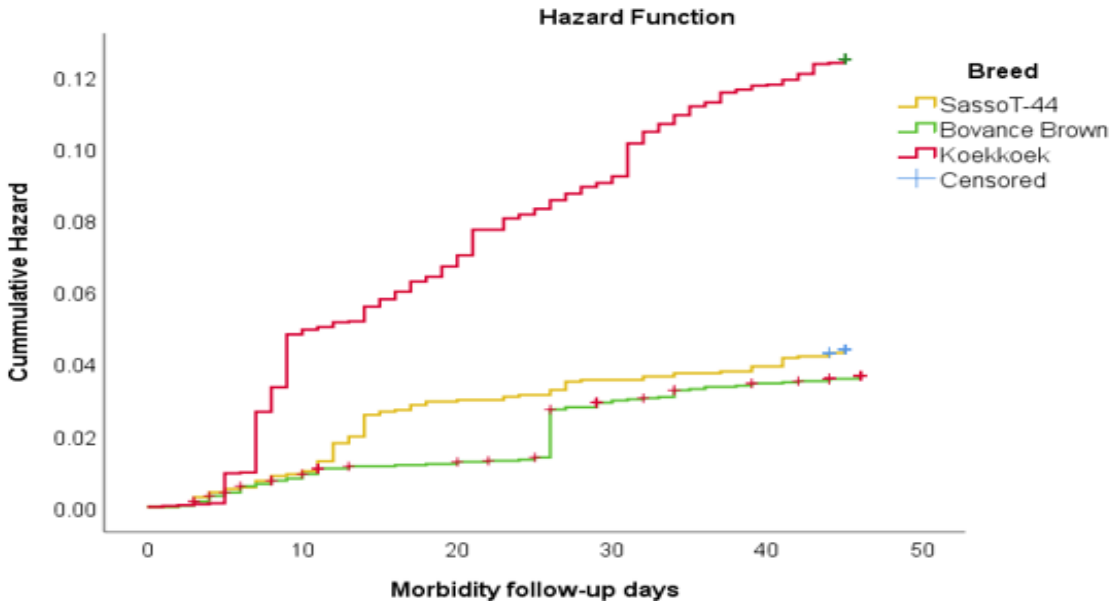

Potential variables that were significantly associated with crude mortality based on multivariable Cox

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** ref = reference*

Serological investigation

CONCLUSION AND RECOMMENDATION

ACKNOWLEDGMENTS

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