

Sero Prevalence and associated risk factor of PPR disease in Goats of Bahirdar Zuria District

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ABSTRACT

A cross-sectional study design was employed from April 2018 to November 2018 with the objectives of determining the sero-prevalence of PPR and identifying its associative putative risk factors in selected sites of Bahir Dar Zuria district. Study sites were selected purposively, while simple random sampling technique was employed to select study households and individual animals. Accordingly, a total of 384 goats were considered for this study and serum samples were collected from PPR vaccine non-vaccinated goats. R-software was used to manage and analyze data. Univariable logistic regression was used to evaluate causation and quantify the association between the putative risk factors and sero-prevalence of PPR. All significant variables ($P < 0.05$) tested in the univariable logistic regression was further tested by multivariate logistic regressions to adjust confounding and see their independent effect on PPR sero-positivity. A confidence limit of less than 5% was used to indicate a significant level. The overall sero-prevalence of PPR was 28.12%, with 6.77 and 21.35% in Wondata and Dehina Mariam kebele, respectively and it varies significantly ($P < 0.000$). Location, Sex and herd size were also found significantly associated with PPR sero-positivity by multivariable logistic regression. In conclusion, though goats were the major source of livelihood in the study areas, the prevalence of PPR was higher and it is the major constraint that seriously hindering goat production and productivity. Thus, improved goat management practices along with seasonal PPR vaccination is highly recommended in order to prevent PPR outbreak.

Key words: Antibody, PPR, Prevalence, Risk factor

INTRODUCTION

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MATERIALS AND METHODS

Description of the Study Area

Sampling Strategy

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Sample Size Determination and Study Design

$$n = \frac{P(1-P)}{d^2}$$

- n
- P
- d

Method of Data Collection

Blood sample collection

Laboratory analysis

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Data Management and Analysis

RESULT AND DISCUSSION

Sero-Prevalence of PPR

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Risk factors	N	Positive	Prevalence (%)	Odds ratio	95% Conf. Interval of OR	P-value

Putative risk factors investigated against PPR sero-positivity

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Risk factors	N	Positive	Prevalence (%)	Odds ratio	95% Conf. Interval of OR	P-value

CONCLUSION AND RECOMMENDATION

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