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Extended Abstract
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Major Causes of Lameness in Cart-Horses in Jimma Town, Oromia, SouthWest Ethiopia

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Abstract

A cross-sectional survey was carried out in Jimma town to determine the distribution and causes of lameness in cart-horses. A semi-structured questionnaire was designed and administered to collect all important data from April 2018 to May 2018. A total of 384 horse owners were interviewed to assess the possible cause of lameness. Statistical analysis was done by using SPSS software version 20. Among the total of 384 study participants interviewed 63.5% of them reported that their horse got injuries resulting from different sources. Mechanical injury was recorded the highest (48.6%) causes of lameness whereas car accident was found to be the least. However, no significant (P>0.05) variation among the causes, level of education and age of the owners were documented. Respondents stated that, 65.2%, 29.9% and 4.9% of lame horses were managed by veterinarian and paraveterinarians, traditional healers and by themselves, respectively. In conclusion, the current study has revealed a high occurrence of lameness in cart-horses and mechanical injury is identified as major cause. Thus, awareness creation to horse owners and cart-horse drivers is important to prevent the occurrence of lameness.

Keywords: Cart-horses; Lameness; Jimma town

Materials and Methods

Study area: The study was conducted from April, 2018 to May, 2018 at Jimma town, which is located at about 352 km south west of Addis Ababa. Geographically, the town is lies between a latitude of 7°41'N and longitude of 36°50'E and it receives a bimodal rain fall with an average annual rain fall of 1530 mm. The mean annual maximum and minimum temperature ranges from 25°C-30°C and 7°C-12°C, respectively. According to the statistical data obtained , Jimma zone has a livestock population of 2, 016, 823 cattle, 288, 411 goats, 942, 908 sheep and 74574 horses, 49, 489 donkey, 28, 371 mules and 1, 139, 735 poultry.

Study design: A cross-sectional survey was carried out in Jimma town to determine the occurrence and associated risk factors of lameness in cart-horses. The study was conducted using questionnaire survey. A semi-structured questionnaire was administered by personal interview to collect all important data from April 2018 to May 2018.

Source and study population

All cart-horses found in Jimma town were the source population. The selected horses from this source population found in Jimma town were the study animals. The study was conducted from April, 2018 to May, 2018 in Jimma town.

The study design was done by a questionnaire to study the cause and associated risk factors of lameness in working cart horses.

Sample size determination and sampling strategy

The total sample size (n) for a cross-sectional study was calculated basing on the predetermination of the following parameters: 50% estimated prevalence, 95% level of confidence, and 5% desired level of precision as methods described by Thrusfield [9]. N=1.962 × Pexp (1-Pexp)/d2, Where; n=Number of Study Population, Pexp=Expected Prevalence and d=Desired Precision. Using the above formula, the calculated sample size was 384. As the information obtained from Jimma town cart-horse association, the estimated horse population in the study area was 1252. Since the required sample size (n) was 384; the study animals were selected by systematic random sampling method (SRSM) as follows: X=1252/384=3; thus, every 3 horse interval the sample was collected.

Data collection

Semi-structure questionnaire with regard to the risk factors for the occurrence of the lameness was developed and administered to selected horse owners in Jimma town. The study was conducted from April 2018 to May 2018 in Jimma town, South-Western Ethiopia.

Data analysis

Information collected through questionnaire was extracted and summarized for analysis using SPSS statistical software computer programs (SPSS version 20). Descriptive statistics like percentage and frequencies were computed. Pearson's Chi square test was used to evaluate relationship between different variables.

Results

The demographic characteristics of respondent are summarized in Table 1. The majorities (99.5) of the respondents were found to be male and their age distribution includes 18-29 years (67.4%), 30-60 years (31%) and above 60 years (1.6%). The educational background of study participant was (63.3%), (20.1%), (0.0%) and (16.7%) attended in primary, secondary, college graduate and not go for education, respectively.

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