

Bacteriological identification and biotyping of *Escherichia coli* from diarrheic lambs in and around Debre Berhan town, Ethiopia

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Background: Infectious diarrhea is the most significant cause of morbidity and mortality in neonatal dairy sheep throughout the world. This is the first study conducted on isolation and biotyping of *E. coli* from lamb diarrhea in and around Debre Birhan. The present study was undertaken with the objective of isolation, omnilog characterization and biotyping of *E. coli* isolates from faecal samples around Debrebrhan .

Methods: A cross-sectional study was conducted from October, 2012 to April, 2013. The study involved in lambs less than three months of age showing clinical symptoms of diarrhea. Standard cultural and Omnilog tests were done to identify *E. coli* species and biotypes; descriptive statistics and Chi-square were used to analyze the collected data.

Results: From a total of 100 diarrheic lambs examined 84% were found to be positive for *E. coli*. On the basis of fermentation reactions of sugars viz. dulcitol, raffinose, rhamnose, salicin, starch and sucrose, 70 isolates utilized one or more sugar while 14 isolates failed to utilize any of the sugars. 70 *E. coli* isolates were biotyped into 15 different combinations. Association between different age groups and occurrence of lamb diarrhea caused by *E. coli* strains showed a significant association ($p < 0.05$). From the questionnaire findings, 60% of all the health problems in lambs were due to diarrhea where young sheep were more affected.

Conclusion: pathogenic *E. coli* has the potential to cause sheep diarrhea. The distribution of the *E. coli* isolates in to different biotypes indicates the diverse nature of the organism. Therefore, further detailed study should be carried out in understanding the role of *E. coli* in lamb diarrhea and identify the virulent strains involved.

Key words: Biotyping, Debre Birhan, Lamb diarrhea, Omnilog, Sugars, Ethiopia

Biography

Metasebia Aklilu has completed her M.Sc at the age of 25 years from Addis Ababa University and she is the researcher of Addis Ababa University.

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