INTRODUCTION

Haemoproteozan diseases cause devastating losses to the livestock industry throughout the world. However, it is known that most of blood protozoan parasites cause anaemia by inducing erythropagocytosis. These haemoproteozan are vector borne economically important in Asia and has always been a formidable barrier to the survival of exotic as well as cross bred cattle (Ananda et al., 2009) resulting in US $ 800 million annual loss due to tropical theileriosis in India. Bovine babesiosis is equally important disease because of direct losses of production as many animals die and undergo a long period of convalescence entailing loss of milk and meat production (Bhatnagar et al., 2015). Endemic presence of these blood parasites has been reported in animals of India (Vahora et al., 2012). With early diagnosis and effective treatment, the mortality rate can be reduced. Hence, an attempt was made to study the prevalence and evolve suitable treatment regimen for effective and early recovery from blood parasites.

MATERIALS AND METHODS

The study was carried out in 524 blood samples collected from clinically suspected indigenous and crossbred cattle, suffering with varying range of symptoms reported to veterinary hospital, Pantnagar during January 2015 to December 2016. Blood smears were prepared, fixed with methanol and stained using Giemsa stain to examined under microscope (100 X) with immersion oil for the identification of blood parasites (Soulsby, 1982).

RESULT AND DISCUSSION

The study was conducted during 2 years period to observe the overall, yearly & seasonal prevalence of blood parasites in cattle. The overall prevalence of blood parasites (Table 1) observed in current study was 9.92% concomitant to Bhatnagar et al., (2015).

Table 1 Prevalence of haemoproteozan diseases in large animals of Kumaon Tarai of Uttarakhand during 2015-16.

<table>
<thead>
<tr>
<th>SI No.</th>
<th>Parasite</th>
<th>Presence</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Anaplasma</td>
<td>3 (5.77%)</td>
</tr>
<tr>
<td>2</td>
<td>Babesia</td>
<td>5 (9.62%)</td>
</tr>
<tr>
<td>3</td>
<td>Theileria</td>
<td>44 (84.62%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>52/524</td>
</tr>
</tbody>
</table>

Out of positive cases, maximum (84.62%) were of theleriosis, much higher than observation of Kohli et al. (2014) as 27.2%. Babesiosis was recorded 9.62% cases, concomitant (9.25%) to Alim et al. (2012). Anaplasmosis could be recorded in 5.77% cases, much lower than the reports of Ananda et al. (2009) as 33%. Such findings might be due to samples collected from clinically ill animals having variation in geo-climatic condition, breed, and exposure of vectors and age (Muhanguzi et al., 2010).

*Corresponding author: Upadhyay A. K*

College of Veterinary & Animal Sciences G. B. Pant University of Agri. & Tech. Pantnagar
During the year 2016, slightly more (51.92%) blood parasite (Table 2) were found as compared to 2015 due to favorable climatic conditions for vectors as higher temperature, humidity and rainfall, etc. (Nath, et al., 2017), However, incidences of babesiosis and anaplasmosis (both 8%) during 2015 remained. The highest (59.62%) prevalence was recorded during rainy season due to peak of vector population followed by summer season (28.85%).

**CONCLUSION**

The overall prevalence of blood parasites was observed 9.92%. Maximum (84.62%) cases were of theileriosis followed by babesiosis 9.62% and anaplasmosis (5.77%).

**References**