

## Haematological studies of Gaolao Heifers

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### Abstract

Hematological study of 15 healthy Gaolao heifers has been carried out. The mean  $\pm$ S.E. values of total erythrocyte ( $10.3 \pm 0.34$  million/cu mm), Hb ( $11.92 \pm 0.33$  gm%), PCV ( $34.07 \pm 1.11\%$ ), MCV ( $33.14 \pm 0.75$  cu  $\mu$ ), MCH ( $11.63 \pm 0.32$   $\mu$ gm), MCHC ( $35.07 \pm 0.70\%$ ), TLC ( $9.51 \pm 0.92$  thousand/cmm), Lymphocytes ( $64.93 \pm 1.74\%$ ), Neutrophil ( $28.93 \pm 1.8\%$ ), Monocyte ( $2.2 \pm 0.34\%$ ), Basophil ( $0.2 \pm 0.11$ ) and Eosinophil ( $3.7 \pm 0.44\%$ ) have been reported.

**Keywords:** Blood, Haematological constituents, Gaolao

The importance of hematological studies in animal health and disease is well established. The haemogram indicates the nutritional status and production capacity of the animal.

### Materials and Methods

Fifteen Gaolao heifers ranging from one to three years of age at 'Government Cattle Breeding Farm, Hetikundi, Dist. Wardha' were selected for the study. All the animals were apparently healthy. Blood samples were collected from jugular vein and placed in sterile test tube containing EDTA (1 mg/ml of blood). These sample were analyzed immediately for total erythrocytes, hemoglobin, PCV, MCV, MCH, MCHC, total leucocytes and differential leucocyte count. The hematological parameters were studied using standard procedure described by Wintrobe (1960) and Schalm *et al.* (1975).

### Results and Discussion

The mean value of hematological entities in Gaolao heifers are presented in the table Pandey and Pal (1971) reported TEC ( $9.09 \pm 0.22$  million/mm), TLC ( $9.93 \pm 0.32$  thousand/mm) and Hb ( $11.67 \pm 0.28\%$ ) in Hariyana young ones. Patel *et al.* (1965) reported Lymphocytes ( $64 \pm 1.5\%$ ), Eosinophils ( $5 \pm 0.4\%$ ) and Monocytes ( $3 \pm 0.2\%$ ) in Gir young ones above one year of age. Hb 7.32 gm% in heifers above one year and 7.85 gm% in heifers above two and half year age was reported by Sharma and Satish Chander (1970). Mullic and Pal (1942) recorded TEC (11.6 million/mm), TLC (13.1 thousand/mm) and Hb (14.6%) in Haryana young ones. These differences in hematological values could be due to nutritional, managerial and environmental factors (Talvekar *et al.*, 1980).

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**Table. Mean ( $\pm$  S.E.) values of hematological entities in Gaolao Calves heifers**

Sr. No.	Blood entities	Mean values	$\pm$ S.E.
1.	TEC ( $\times 10^6$ cmm)	10.3	0.34
2.	Hb (gm%)	11.92	0.33
3.	PCV (%)	34.07	1.11
4.	MCV (cu $\mu$ )	33.14	0.75
5.	MCH ( $\mu$ gm)	11.63	0.32
6.	MCHC (%)	35.07	0.70
7.	TLC ( $\times 10^3$ cmm)	9.51	0.92
8.	Lymphocytes (%)	64.93	1.74
9.	Neutrophil (%)	28.93	1.80
10.	Monocytes (%)	2.2	0.34
11.	Basophil (%)	0.2	0.11
12.	Eosinophil (%)	3.7	0.44

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