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PREVALENCE OF TICKS ON HOST CATTLE AND BUFFALOES AT NANDED (MS) 2023

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ABSTRACT

During this study small sample of Ticks were collected, the Cattle and Buffaloes were surveyed. The seasonal data of prevalence of Cattle and Buffaloes is surveyed. This study gives an idea regarding the prevalence of ticks at Nanded (MS). This study shows 128 total surveyed Cattles of different breeds amongst which 25 Cattles were positive to the tick infestation, also this shows the 43 total surveyed Buffaloes of different breeds amongst which 10 were found positive to the tick attack. This study gives a mean ($\bar{x}$) value seasonal prevalence of Cattle as well as mean ($\bar{x}$) value seasonal prevalence of Buffaloes was 21.74% & 22.94% respectively. The standard deviation (σ) of seasonal prevalence of Cattle and standard deviation (σ) of seasonal prevalence of Buffaloes was 0.073375 & 0.084616 respectively.

KEYWORDS: Cattle, Buffaloes, Prevalence, Seasonal prevalence, Nanded(MS).

INTRODUCTION

The Cattle and Buffaloes are infested by lots of ecto-parasites like Flies, Mites and Ticksetc. Tick infestation causes low productivity of milk in livestock. It also lowers the quality of milk. The Cattle and Buffaloes at Nanded locality are observed to calculate the prevalence of Ticks. The Cattle as well as Buffaloes shows infestation.

Ticks cause serious damage to the livestock. Because of the tick attack Cattle and Buffaloes undergoes some behavioral changes too. The infestation causes anxiety, restlessness, and other symptoms discussed in detail in this research article. The hygiene maintenance is

important to get rid of any ecto-parasitic infestation on Cattle and Buffaloes. (Miss. Afreen Fatema R. K, 2024) In livestock husbandry, ticks are important both as direct blood-feeding parasites and as vectors of a range of production-limiting pathogens with economic and welfare impacts on the livestock industry through reduced production and animal mortality. (Katie Lihou, 2020). The female ticks are mostly found on host bodies & take blood meals till they swell up. After feeding full meal it gets detached from the host. Ticks are ectoparasites that transmit a variety of pathogens that cause many diseases in livestock which can result in skin damage, weight loss, anemia, reduced production of meat and milk, and mortality. (Sadia SalimKhan, 2022)

METHODOLOGY

Collection of ticks

The Cattle and Buffaloes at Nanded locality are observed and the Ticks are collected byhand picking method. The ticks from the body of Cattle as well as Buffaloes are removed by using forceps. After removing ticks are preserved in 70% ethanol in glass bottles. During studythe shed area of Cattle and Buffaloes.

Calculations

The prevalence estimated by the small sample of total no of Cattle observed was 128 amongst which 25 Cattle found infected by ticks, the total no of Buffaloes observed was 43 out of which 10 Buffaloes were infected by ticks. The sample are shown in tabular form as well as tocalculate the prevalence of ticks a standard formula given below:

$$Prevalence = \frac{No.of\ infested\ cattle}{Total\ cattle\ surveyed} \times 100$$

Table No. 1: Prevalence of ticks on cattles.

Sr. No.	Season	Cattle Samples		Prevalence of Ticks on Cattle	Mean (x̄) of prevalence	Std.Dev (σ) of prevalence
		Total cattle surveyed	Infested Cattle			
1.	Summer	19	06	31.57%	21.74%	0.073375
2.	Winter	66	13	19.69%		
3.	Monsoon	43	06	13.95%		
		Σ= 128	Σ= 25			

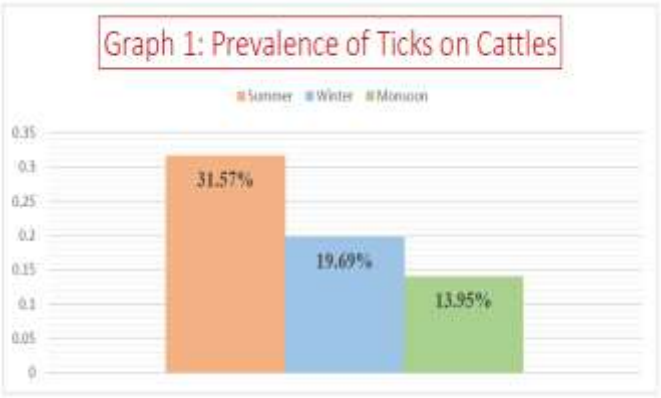
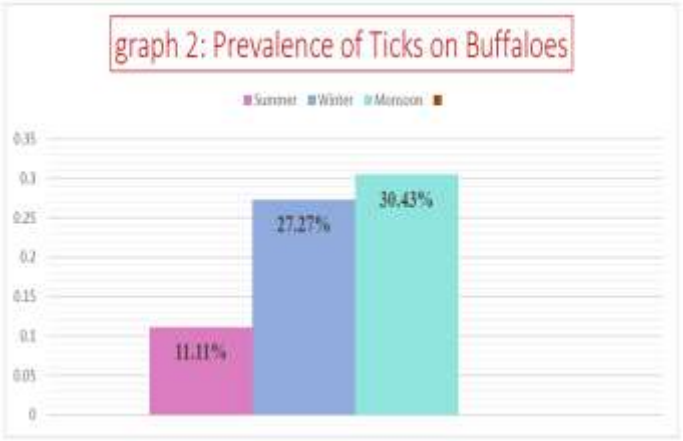


Table No. 2: Prevalence of ticks on buffaloes.

Sr. No.	Season	Buffaloes samples		Prevalence of Ticks on Buffaloes	Mean (x̄) of prevalence	Std.Dev (σ) ofprevalence
		Total Buffaloes surveyed	Infested Buffaloes			
1.	Summer	9	1	11.11%	22.94%	0.084616
2.	Winter	11	3	27.27%		
3.	Monsoon	23	7	30.43%		
		Σ= 43	Σ= 10			



RESULT AND DISCUSSIONS

The ticks cause infestation & the prevalence of ticks was at high level during late summerin case of Cattle where as in early Monsoon in case of Buffaloes. If we compare prevalence between both the animals then we will find that Buffaloes had high prevalence then Cattle. In both Cattle and Buffaloes the infestation was moderate in winter. When we focus on mean prevalence of both Cattle and Buffaloes they have close values. The mean prevalence count of Cattle is **21.74%** whereas the mean prevalence count of Buffaloes is **22.94%**. The standard deviation of Cattle prevalence is **0.073375** and the standard deviation of prevalence of Buffaloes is **0.084616**.

CONCLUSION

This study shows the prevalence of ticks in Nanded area to which Cattle and Buffaloes are host. The ticks cause infestation to Cattle and Buffaloes on all the seasons but the infestation is more in Buffaloes as compared to Cattle. The reason of more infestation on Buffaloes could betheir coat color as its dark and provide more camouflage facility to the ticks to hide their selves from predators. Another the most important fact we observed during study is that the infestation is increased during late summer, winter & early monsoon.

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