

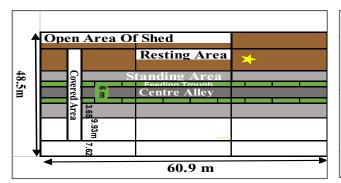
*Indian Journal of Animal Sciences* **94** (7): 646–651, July 2024/Article https://doi.org/10.56093/ijans.v94i7.150161

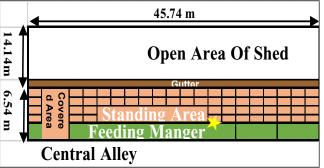
## Seasonal dynamics and climatic influences of greenhouse gases (CO<sub>2</sub>, CH<sub>4</sub>) and ammonia (NH<sub>3</sub>) concentrations on loose housing cattle shed

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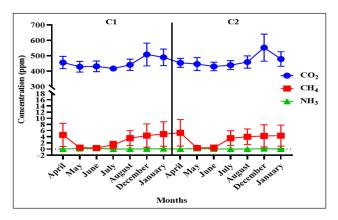
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Received: 8 April 2024; Accepted: 6 June 2024

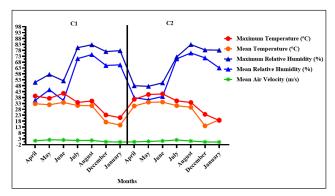




Supplementary Fig. 1. Layout and equipment position marked  $\times$  in C1 (left) and C2 (right) sheds.



Supplementary Fig. 2. GHG and NH3 concentration (ppm) during different months in cattle sheds.



Supplementary Fig. 3. Microclimatic conditions within cattle sheds.

Supplementary Table 1. Temperature (°C), RH (%), and average velocity (m/s) in cattle sheds during different seasons

Season Shed	Summer			Rainy			Winter		
	Temp.	RH	AV	Temp.	RH	AV	Temp.	RH	AV
C1	32.85±4.21	38.69±9.94	1.862±0.68	31.12±2.39	72.89±6.87	1.666±0.46	15.94±4.20	65.48±12.5	0.389±0.32
C2	33.00±4.39	37.62±8.48	$0.800 \pm 0.41$	30.40±2.33	73.34±7.25	1.612±0.73	16.10±4.54	68.01±12.4	$0.334 \pm 0.26$