



Effect of heat stress amelioration during dry period on biological responses, proinflammatory cytokines and milk production in subsequent lactation of Surti buffaloes

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Supplementary Table 1. Immune response parameters (*in vitro* lymphocyte proliferation assay stimulation index and neutrophilic phagocytic activity) during dry period and subsequent lactation of Surti buffaloes (Mean±SE)

Parameter	-8wk		- 3wk		+1wk		+3wk	
	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment
LPASI	1.128±0.016	1.131±0.010	1.248 ^a ±0.002	1.264 ^b ±0.004	1.508 ^a ±0.005	1.578 ^b ±0.019	1.380 ^a ±0.016	1.439 ^b ±0.014
NPA	0.659±0.010	0.673±0.013	0.417 ^a ±0.004	0.452 ^b ±0.008	0.288 ^a ±0.007	0.315 ^b ±0.005	0.524 ^a ±0.010	0.598 ^b ±0.007

Mean bearing different superscript across row (a, b) differ significantly ($p \leq 0.05$) between groups. ‘-’ prepartum; ‘+’ postpartum.

Supplementary Table 2. Body condition score (Mean±SE) during dry period and subsequent lactation of Surti buffaloes

Parameter	-8wk		- 3wk		+1wk		+3wk	
	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment
BCS	2.93±0.03	2.90±0.04	3.81±0.12	3.95±0.13	3.02 ^a ±0.07	3.25 ^b ±0.02	3.01 ^a ±0.06	3.20 ^b ±0.02

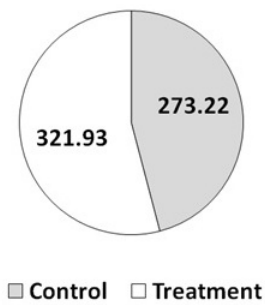
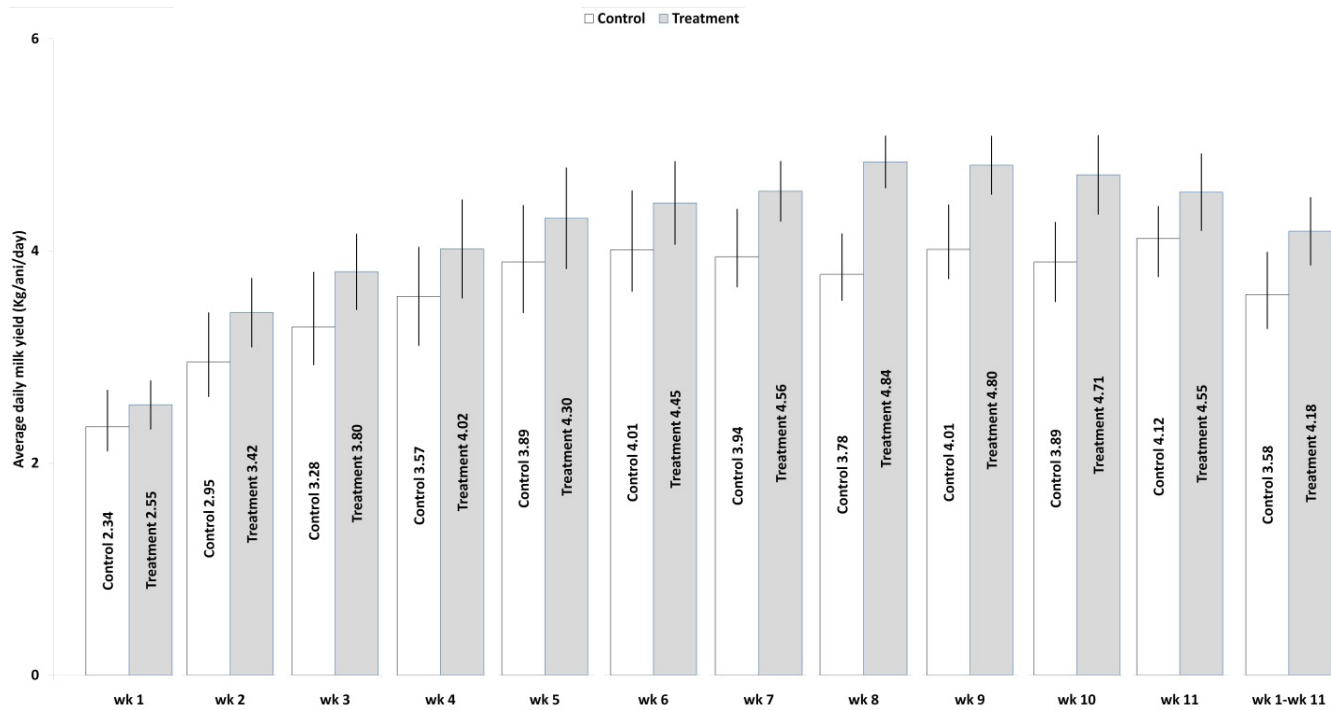
Mean bearing different superscript across row (a, b) differ significantly ($p \leq 0.05$) between groups. ‘-’ prepartum; ‘+’ postpartum.

Supplementary Table 3. Milk composition (Mean±SE) during different weeks of subsequent lactation of Surti buffaloes

Parameter	+1wk		+3wk		+5wk		+7wk		+9wk		+11wk	
	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment
Fat (%)	8.43 ±0.07	8.26 ±0.12	8.02 ±0.07	8.19 ±0.09	7.68 ±0.06	7.85 ±0.09	7.38 ^a ±0.10	8.05 ^b ±0.05	7.20 ^a ±0.13	7.94 ^b ±0.03	6.67 ^a ±0.06	7.46 ^b ±0.09
SNF (%)	10.53 ±0.13	10.50 ±0.05	10.02 ±0.23	10.22 ±0.35	9.75 ±0.36	10.01 ±0.38	9.60 ±0.38	9.83 ±0.36	9.15 ^a ±0.03	9.53 ^b ±0.05	9.12 ^a ±0.02	9.23 ^b ±0.03
Protein (%)	6.01 ±0.04	5.99 ±0.03	5.89 ±0.03	5.91 ±0.01	5.50 ±0.38	5.67 ±0.35	5.18 ±0.34	5.29 ±0.35	4.90 ±0.45	5.11 ±0.37	4.74 ±0.37	4.96 ±0.40
Casein (%)	4.02 ±0.15	4.31 ±0.05	4.25 ±0.44	4.49 ±0.44	4.19 ±0.13	3.89 ±0.13	3.68 ±0.14	4.00 ±0.11	3.09 ±0.30	3.49 ±0.36	3.14 ±0.16	3.35 ±0.16
Lactose (%)	3.71 ±0.08	3.73 ±0.08	3.93 ±0.07	4.05 ±0.10	4.47 ±0.03	4.34 ±0.06	4.65 ^a ±0.04	4.86 ^b ±0.06	4.90 ^a ±0.05	5.07 ^b ±0.02	5.21 ^a ±0.04	5.49 ^b ±0.05
Lactate (mEq/l)	0.190 ±.001	0.189 ±.001	0.169 ±.023	0.158 ±.022	0.162 ±.022	0.153 ±.023	0.155 ^b ±.001	0.147 ^a ±.001	0.149 ^b ±.001	0.139 ^a ±.001	0.144 ^b ±.001	0.137 ^a ±.001
Density (SG) (g/cm ³)	1021.72 ±1.50	1018.55 ±1.38	1014.90 ±2.03	1015.60 ±0.96	1015.75 ±2.37	1011.12 ±1.35	1019.15 ^b ±2.45	1011.88 ^a ±1.06	1017.32 ±1.78	1013.40 ±1.55	1022.55 ±4.49	1029.67 ±3.28
Free fatty acid (mmol/l)	0.61 ±0.02	0.59 ±0.02	0.69 ±0.13	0.62 ±0.14	0.88 ±0.13	0.79 ±0.15	1.56 ±0.14	1.39 ±0.13	1.67 ^b ±0.01	1.54 ^a ±0.01	1.61 ^b ±0.02	1.55 ^a ±0.01
Total solids (%)	17.54 ±0.32	16.88 ±0.14	15.93 ±0.28	15.44 ±0.35	15.70 ±0.24	15.25 ±0.17	15.65 ±0.27	14.88 ±0.26	15.15 ±0.14	15.27 ±0.21	15.19 ±0.07	15.03 ±0.07
Urea (mg/l)	339.33 ±3.00	334.83 ±4.01	366.00 ±22.84	349.67 ±25.04	474.00 ±24.19	435.83 ±27.01	565.67 ±18.33	527.17 ±24.31	554.83 ^b ±5.78	524.50 ^a ±4.60	559.83 ^b ±5.99	526.67 ^a ±5.23

Mean bearing different superscript across row (a, b) differ significantly ($p \leq 0.05$) between groups. '+' postpartum.

Supplementary Fig. 1. Milk production (kg) (mean±SE) during subsequent lactation in surti buffaloes.



Supplementary Fig. 2. Total milk yield (kg) upto 11 wk of subsequent lactation in Surti buffaloes.