

Heat Stress Alleviation Efficacy of PHYTOCEE® in Cattle: Effects on Cortisol Levels

OBJECTIVE

To evaluate effect of PHYTOCEE® on cortisol levels in saliva and milk samples of heat stressed dairy cows.

MATERIALS AND METHODS

A total of 12 Holstein Friesian cross bred (HFx) dairy cows aged between 1-5 years and in their early and mid-lactation period were selected for this study. Selected dairy cows were equally divided in to 2 experimental groups namely G1-Control group (n=6) and G2-PHYTOCEE® treatment group (n=6) at 50 g/animal/day. The Temperature-Humidity Index (THI) thresholds for heat stress in cattle was as follows; for mild heat stress (THI 72 to 79), for moderate heat stress (THI 79 to 89) and for severe heat stress (THI > 89). The duration of treatment was 33 days (5 days baseline + 28 days PHYTOCEE® supplementation). The cortisol level was estimated in saliva and milk samples of dairy cows and assessed.

RESULTS

Effect of PHYTOCEE® on cortisol levels in saliva and milk

Groups	Day 0		Day 14		Day 28	
	Cortisol levels (pg/mL)					
	Saliva	Milk	Saliva	Milk	Saliva	Milk
G1-Control	324.05	619.52	407.61	956.54	390.43	679.79
G2- PHYTOCEE® New	388.09	818.45	323.74	1142.17	436.08	740.02

Values are expressed as Mean; n=5-6

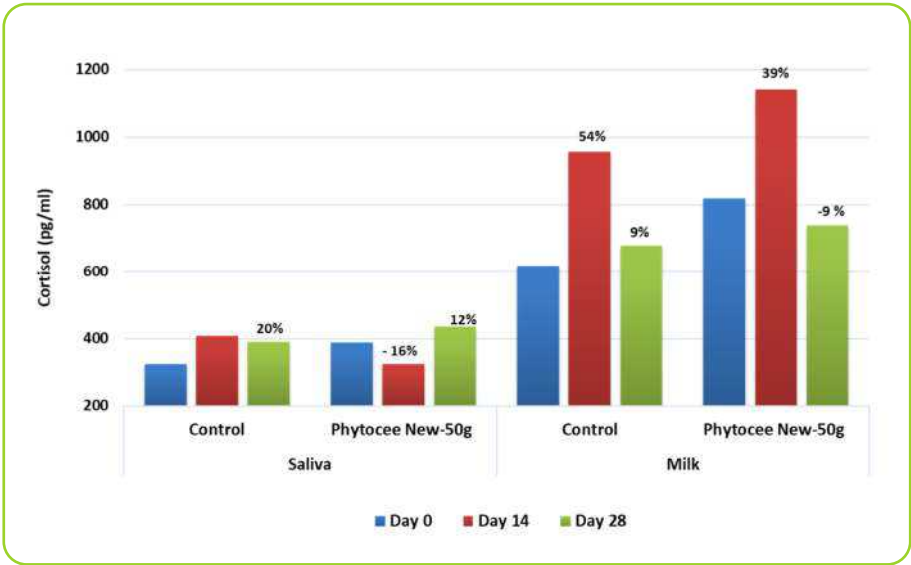


Figure : Effect of PHYTOCEE® on change in cortisol levels

CONCLUSIONS

PHYTOCEE® supplementation decreased the rise in cortisol (% change) during stress as compared to control on day 14 and on day 28.

OUTCOME

Hence, PHYTOCEE® supplementation to dairy cows could be suggested for alleviation of environmental stress.