

potential effect of temperature-humidity index on milk production and physiological performance of lactating Egyptian buffaloes. Egypt.

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ABSTRACT

Ten Egyptian buffaloes (*Babalus bubalis*) were housed in shaded open yards and they were maintained under the same managerial and environmental conditions. Milk samples (30 ml each) were collected once weekly and milk samples were collected at 6:00 am and 6:00 pm and mixed. Blood samples (10 ml each) were collected monthly. Ambient temperature (AT, °C) and relative humidity (RH, %) were measured two times daily (07:00 am and 2:00 pm) the maximum temperature was recorded during summer where it was 39.93 ± 0.34 . The maximum relative humidity was recorded during summer where it was 74.62 ± 0.49 and the maximum THI was recorded during summer where it was 96.32 ± 0.57 but the average was 80.37 ± 0.36 . The maximum average of weekly milk yield and sold not fat (S.N.F) were recorded during THI was in no stress. The maximum average of milk fat (F) % and protein % were recorded during THI was in heat stress. The maximum average of IGF-1 was recorded during THI was in heat stress. there was decrees in Cholesterol during THI was in no stress combating to the other THI and the maximum concentration of T.P was recorded during THI was in no stress combating to the other THI and the same result was recorded in Albumin, Alb / Glo ratio and Glucose. There was increase in Blood hemoglobin during THI was in no stress combating to the other THI and the maximum concentration RBCs was recorded during THI was in no stress.

Key words: Egyptian buffaloes, temperature-humidity index (THI), hormonal profile, milk production, milk composition.