PSVI-1 Effects of Rumen-Protected Methionine on Reproduction and Body Temperature of Nelore Cows in hot and Humid Environments. Vinicius de Souza Izquierdo¹, Fernanda Lopes², Bernardo Da Silva Menezes³, Edgard Gonçalves Malaguez³, Marcio Nunes Corrêa⁴, Filipe Morigli⁴, Cassio Cassal Brauner⁴, Eduardo Schmitt¹,
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Abstract: This study aimed to evaluate the effects of dietary supplementation of rumen-protected methionine (RPM) on the body temperature and conception rate of Nelore cows exposed to high temperature and humidity index (THI) values. This study was realized on a commercial beef farm located in the north of Brazil (5º 31' 39" S, 48º 49' 18" W). At d-31, 31 days before the FTAI protocol, a total of 563 lactating multiparous Nelore cows were divided into two treatments, with three blocks each, the control group (CG) and methionine group (MG). Both groups were kept on tropical pastures and received a mineral supplement. The MG Group was supplemented with 3g RPM/100g during 77 days, and the expected mineral supplement intake of both groups was 100g/cow/day. Between d0 and d9 of the FTAI protocol, a subset of groups of cows (n=142) remained with a data logger attached to the progesterone device, to monitor intravaginal temperature (IT) every 30 min. During the period that the cows remained with the dataloggers the minimum, average, and maximum THI were 72.76, 78.02, and 83.28, respectively. Pregnancy diagnosis was realized 35 days after the artificial insemination and the conception rate was calculated as the number of pregnant cows/inseminated cows. Data were analyzed using the JMP GLIMMIX procedure. RPM supplementation did not affect the conception rate (CG = 64.36% vs. MG = 58.19%, P >0.05). Intravaginal temperature from day 1 to day 8, between 0630 and 2030 h and between 2200 and 0100 h were lower (P≤0.05) for MG in comparison with CG. The average and the maximum IT were, respectively, 38.94°C, 40.88°C for MG and 39.02°C, and 41.38°C for CG. In conclusion, the supplementation of rumen-protected methionine reduced the internal body temperature in Nelore cows submitted to high THI environments, during the hottest hours of the day, but does not affect the conception rate.

Keywords: environment, internal temperature, THI

PSVI-5 Treatment of Flunixin Meglumine and Prostaglandin E2 had no Effect on Corpora Lutea of Beef Cows. Jamie E. Larson¹, Tate Johnson¹, Rebecca M. Swanson¹, Riley D. Messman¹, Caleb O. Lemley¹,¹Mississippi State University
Abstract: Flunixin meglumine (FM) is a COX enzyme inhibitor and prostaglandin E2 (PGE) builds the corpus luteum (CL). However, the use of FM in conjunction with PGE has not been studied. The objective of this study was to determine effects of intravenuous administration of FM and intravaginal release of PGE on characteristics of the CL and concentrations of PGE and progesterone in blood. Beef cows (n = 24, divided between two replicants over time) were synchronized using the Select Synch + CIDR protocol (expected estrus = d 0). Cows were randomly assigned to one of four treatment groups in a factorial arrangement, with 6 cows in each: Control, FM, PGE, or FM+PGE. Treatments were administered from d 13 to 19 (FM 2.2 mg/kg iv every 12 hr; PGE released in osmotic pump at 0.1 mL/d). Every other day from d 0 to 26, transrectal ultrasonography with color Doppler was used to measure size and blood perfusion of CL; images were later analyzed with ImageJ. Blood samples were collected via jugular venipuncture every other day from d 13 to 26 and later analyzed for concentrations of progesterone (P4; RIA) and PGE (ELISA). Data were analyzed using the mixed procedure of SAS 9.4 with day as a repeated measure; significance was declared when P ≤ 0.05. There were no interactions between FM and PGE, thus main effects of treatments were evaluated. There were no differences (P ≥ 0.141) in size, vessel density, or blood perfusion of CL between treatment groups. There were no differences (P ≥ 0.141) in concentrations of PGE in blood samples and PGE in circulation.

Keywords: cattle, corpus luteum, ovary