

## ABSTRACTS: 34TH ANNUAL MEETING OF THE BRAZILIAN EMBRYO TECHNOLOGY SOCIETY (SBTE)

Physiology of reproduction in male and semen technology

**Bovine chilled semen by 24h or 48h in two different commercial extenders for fixed-time artificial insemination in beef cattle****Juliana Corrêa Borges Silva<sup>1,4</sup>, Márcio Ribeiro Silva<sup>2</sup>, José Francisco Martinelli Massoneto<sup>3</sup>, Pablo Storari Loro<sup>3</sup>, Ivo Augusto Cavalieri Alves<sup>3</sup>, Eriklis Nogueira<sup>1,4</sup>, Luiz Orcirio Fialho de Oliveira<sup>4</sup>, Urbano Gomes Pinto de Abreu<sup>1</sup>, Daniel Barros Marinho<sup>3</sup>**

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Chilled semen showed an increase in pregnancy compared to cryopreserved semen, in the ejaculate, of the same bulls (J. C. Borges-Silva et al., *Reproduction Fertility and Development*, on line, 2015). However, it is unknown how long chilled semen remains with satisfactory pregnancy rates, in different commercial extenders. Thus, the aim study was to evaluate the pregnancy rate after fixed-time artificial insemination (FTAI) using chilled semen at 5°C, for 24 and 48 hours using, two commercial extenders (B - Botubov and I - Inra 96), totaling four treatments (24B, 24I, 48B and 48I). Ejaculates were collected from five genetically superior Nellore bulls and were used on two farms (1 and 2) on the Pantanal - MS. The 0.25 mL straws ( $30 \times 10^6$  sperm) were chilled in four Botutainer boxes, two for each farm (24 and 48 hours), until the FTAI moment. All semen was in CBRA standards (70% motility minimum and 30% total defects maximum). The median proportion of extender:semen used to diluted liquid semen was 5:1. Nellore cows (n = 946) submitted to FTAI received 2mg estradiol benzoate (EB, RICBE<sup>®</sup>, im, Tecnopec-Agener União, Brazil), and an intravaginal progesterone device (Primer<sup>®</sup>, Tecnopec-Agener União, Brazil) on D0 which remained for 8 d, and 150µg d-cloprostenol (Prolise<sup>®</sup>, im, Arsa, Argentina) and 1mg EB (RIC-BE<sup>®</sup>) on D8. On D10, 44 h after implant withdrawal, the cows were randomly inseminated using cooled semen of the different treatments. The pregnancy diagnosis was performed 40 days after FTAI by ultrasound (DP-2200 Vet<sup>®</sup>, Mindray, China). The statistical analysis was accomplished by the SAS program (SAS/STAT<sup>®</sup> 9.2, SAS Institute Inc., USA), using the variance analysis by Tukey and Chi-square test (P < 0.05). There was no difference in pregnancy per AI (P/AI) using chilled semen by 24 (49.3% [319/646]) or 48 hours (49.6% [149/300]), and there was no difference among extenders (P > 0.05) (24B - 49.5% [161/326], 24I - 49.3% [158/320], 48B - 52.7% [78/148], 48I - 46.6% [71/152]), although one bull differed (P < 0.04) for extender B (58.6%) in relation to I (34.1%), there was no difference among bulls (P > 0.05), but there was a difference between farms 1 (54.5% [239/438]) and 2 (45.0% [229/508]) (P = 0.03). In conclusion, fertility rates were equal when samples were chilled by 24 and 48 hours in both extenders. Therefore, it is possible to use for more long time chilled semen (until 48h at least) when performing a FTAI program. Acknowledgments: Agener União Saúde Animal e Ema Pantanal Ltda. Keywords: pregnancy rate, semen process, sperm viability.