



A082 TAI/FTET/AI

### **Bovigen® Repro Total SE vaccination increases conception rate on FTAI Nelore heifers**

**Gustave Decuadro-Hansen<sup>1</sup>, Márcio de Oliveira Marques<sup>2</sup>, Rubens Cesar Pinto Silva<sup>2</sup>, Mario Ribeiro Junior<sup>2</sup>, Marcos Henrique Alcantara Colli<sup>3</sup>, Lais Mendes Vieira<sup>3</sup>, Giovani Pastre<sup>1</sup>, Pietro Sampaio Baruselli<sup>3</sup>**

<sup>1</sup>VIRBAC Saúde Animal, Carros, France; <sup>2</sup>GERAEMBRYO, Cornelio Procopio, PR, Brazil; <sup>3</sup>FMVZ/VRA/USP, São Paulo, SP, Brazil.

The objective of the present experiment was to evaluate the effect of Bovigen® Repro Total SE vaccine on conception rate of Nelore heifers (*Bos taurus indicus*) on 30 and 60 days after fixed timed artificial insemination (FTAI). The hypothesis was that vaccination, prior to FTAI, would increase conception rate and reduce gestational loss between 30 and 60 days of gestation, when compared to a non-vaccinated control group. A total of 759 Nelore heifers without prior vaccination for IBR, BVD and Leptospirosis underwent ultrasound cyclicity assessment (Aloka SSD 500, Tokyo, Japan) and 459 pubertal heifers were selected for FTAI. These 459 heifers were divided into one of two groups: Control (non-vaccinated) and Vaccinated (two IM doses of Bovigen® Repro Total SE, Virbac Animal Health, São Paulo, Brazil), the animals were randomized using the body condition score as a balancing factor between groups. The animals in the control group received no vaccination at any time, while the Vaccinated Group received the first dose of the reproductive vaccine 25 days before the onset of the FTAI protocol (Day -25; at the time of ultrasonography) and the second dose on the onset of the FTAI protocol (Day 0). All animals received an auricular ear implant with 3mg of Norgestomet (Crestar, MSD, Brazil) and 2mg of Estradiol Benzoate IM (Estrogin, Biofarm, Brazil) on Day 0. After 8 days (Day 8), the device was removed and 0.265mg of Cloprostenol Sodium (Ciosin, MSD, Brazil), 300IU of eCG (Novormon, Zoetis, Brazil) and 0.5mg of Estradiol Cypionate (ECP, Zoetis, Brazil) were administered IM. The FTAI was performed by the same technician 48 hours after device withdrawal (Day 10) with the same semen batch in all females. Ultrasound evaluations were performed 30 and 60 days after FTAI (Days 40 and 70, respectively) to determine conception rate and gestational loss on each group. Gestational loss was considered as the absence of fetus or the presence of a dead fetus on Day 70, when the heifer was pregnant on Day 40. Data were analyzed using SAS® (Statistical Software Analysis, version 9.3 Institute Inc., Cary, NC, USA, 2003). The 30-day conception rate was lower ( $P = 0.02$ ) on the Control (42.5%; 96/226) than on the Vaccinated Group (50.2%; 117/233) and remained ( $P = 0.03$ ) at 60 days after FTAI [Control: 42.0% (95/226) vs Vaccinated Group: 48.5% (113/233)]. The gestational loss between 30 and 60 days did not differ ( $P = 0.20$ ) among groups [Control (1.0%; 1/96) and Vaccinated (3.4%; 4/117)]. Thus, we concluded that the Bovigen® Repro Total SE vaccine was efficient to increase conception rate at 30 and 60 days post-FTAI in Nelore beef heifers, but no effects upon early pregnancy loss were observed.

Acknowledgments: Virbac Animal Health and HoRa Agronegócio.