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IN VITRO PRODUCTION OF EMBRYOS FROM *Bos indicus* AND *Bos taurus* COWS SUPPLEMENTED WITH TWO ENERGY DIETARY LEVELS

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The nutrition affects reproduction features of donor oocytes from *Bos indicus* and *Bos taurus* breeds. Then, this study aimed to compare data from *in vitro* embryo production of cumulus oocyte complexes (COC's) recovered by *ovum* pick up (OPU) from Gir and Holstein cows supplemented with two levels of diet energy. Eight cows of each breed were randomly distributed in a 2x2 factorial design: 1) low energy Gir (LG) and 2) low energy Holstein (LH) – 04 cows of each group received 100% of maintenance diet; 3) high energy Gir (HG) and 4) high energy Holstein (HH) – 04 cows of each group received 170% of maintenance diet. At first, all donors were subjected to an adaptation period for 3 weeks (maintenance diet). Afterwards, they were directed to their respective treatment for 46 days before OPUs. The four OPU sessions were conducted using Aquila Pro ultrasound equipment (Esaote Pie Medical, USA) and occurred each 14 days. Before each OPU session follicular waves were synchronized with norgestomet (Crestar, Intervet, Netherlands) for 5 days and estradiol benzoate (Sincrodiol, Ouro Fino, Brazil). The COC's were recovered from 2-8mm follicles and after they were matured for 22-24h in medium TCM 199 (Invitrogen, USA) added with antibiotics, FSH (Sigma, St. Louis, USA), LH (Sigma) and fetal calf serum (FCS; Invitrogen). Fertilization occurred after semen process by Percoll gradient, following gametes co-incubation for 18-20h. After this, the presumptive zygotes were cultured for 8 days in medium SOFaaci supplemented with 5% FCS. The statistical analysis of data were performed using X² test (P<0,05). There were no significant differences on cleavage rates (D3) comparing LG and HG (mean=66,84%) neither between HG and HH (mean=35%). However, mean blastocyst rate (D8) for the 3 first sessions on Gir breed there was a tendency to higher production from HG than LG, while in the last session occurred the contrary: 36,58%^a x 22,37%^a; 53,13%^a x 30,39%^b; 29,58%^a x 20%^a e 19,7%^b x 37,04%^a; HG x LG, respectively. The Holstein breed, in relation to Gir, behaved in an opposite manner: 3,92%^a x 10,81%^a; 5,75%^a x 10,09%^a; 5,32%^b x 14,14%^a e 13,13%^a x 6,73%^a; HH x LH, respectively. These results suggest that *Bos indicus* and *Bos taurus* respond totally different to energetic diet, in terms of competence of *in vitro* embryo production. We also observed that until days 75 and 89 of the treatment (between 3rd and 4th OPU session) high levels of energy intake could be beneficial for Holstein donors, in opposite to Gir cows. Acknowledgments: Epamig and Fazenda Calciolândia. Financial Support: CNPq/FAPESP/Fapemig/Embrapa

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EPIDEMIOLOGICAL INQUIRY WITH NESTED-PCR FOR DETECTION OF BABESIA EQUI IN A PROGRAM OF EMBRYO TRANSFER

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Horses' health is vitally important to this Embryo Transfer Program, any infectious diseases, particularly babesiosis, can compromise the health of the whole squad and result in early embryonic loss and low pregnancy rates (LOUSINNO et al., 2006, *Acta Science Veterinariae*, 34:39-49). Babesiosis has been cited as a major equine parasite by direct prejudice, such as performance losses and embryonic mortality, as well as indirect prejudice like export prevention (FRIEDHOFF et al., 1990, *Inter. J. Parasit*, 20: 525-535). The Nested-PCR Technique has demonstrated a sensitivity of more than 100 times the technique of direct microscopy, detecting levels of parasitemia of 10⁻⁸ to 10⁻⁹, with high specificity, lower cost and faster time to babesiosis diagnosis (FIGUEROA et al., 1993, *Vet. Parasit*, 50: 69-81). Blood samples were collected in two stables in the city of Seropédica and an equine reproduction center in the city of Itaguaí- RJ with the objective of diagnosing, by Nested-PCR positive animals for *B. equi*. In order to analyse the material, 4 ml of blood were collected in Vacumtainer tubes with EDTA by puncturing of the jugular veins in 28 donors and 54 recipients of embryos Mangalarga Marchador breed is asymptomatic for babesiosis. After the tests in laboratory, 100% of the mares were positive for *B. equi*, demonstrating the epidemiological importance of this hematozoa, which can influence in recovery rates (62,7%) and embryo fixation (63,6%) in Mangalarga Marchador breed mares (SANTOS et al., 2008, *Acta Science Veterinariae*, 36:633). Acknowledges to Animal Parasitology Department- UFRRJ.