



## RESTRICTED SUCKLING: ADAPTATION OF CALVES AND EFFECTS ON THEIR DEVELOPMENT <sup>1</sup>

### MANEJO DE MAMADA CONTROLADA: ADAPTAÇÃO DOS BEZERROS E EFEITOS EM SEU DESENVOLVIMENTO

ANA CAROLINA COPPEDE JUSTINO<sup>1</sup>, GUSTAVO DA SILVA FREITAS<sup>1,5</sup>, PAOLA MORETTI RUEDA<sup>2,5</sup>, TIAGO DA SILVA VALENTE<sup>3,5</sup>,  
 ALINE CRISTINA SANT'ANNA<sup>3,5</sup>, MATEUS JOSÉ RODRIGUES PARANHOS DA COSTA<sup>4,5</sup>

<sup>1</sup>Graduação em Zootecnia, Faculdade de Ciências Agrárias e Veterinárias (FCAV), Universidade Estadual Paulista "Júlio de Mesquita Filho" (UNESP). Via de Acesso Prof. Paulo Donato Castellane s/n 14884-900 - Jaboticabal, SP, Brasil. E-mail: [freitas.zootecnia@yahoo.com.br](mailto:freitas.zootecnia@yahoo.com.br)

<sup>2</sup>Pós-Graduação em Zootecnia, FCAV, UNESP, Jaboticabal, SP, Brasil.

<sup>3</sup>Pós-Graduação em Genética e Melhoramento Animal, FCAV, UNESP, Jaboticabal, SP, Brasil.

<sup>4</sup>Departamento de Zootecnia, FCAV, UNESP, Jaboticabal, SP, Brasil.

<sup>5</sup>Grupo de estudos e pesquisas em Etologia e ecologia animal (Grupo ETCO), FCAV, UNESP, Jaboticabal, SP, Brasil.

To cope with the changes imposed by high technology in animal production, farmers must be aware of some strategies to overcome the difficulties, however, they have to pay attention to minimize the impact of stress generated by some handling practices on the development of animals. The aim of this study was to evaluate the adaptation of calves to the handling routine of restricted suckling and their effects on calves' performance. The breeding season (with 90 days of duration) was carried out for 50 *Bos indicus* calved cows (Nellore and Guzerath purebreds), and two bulls (Guzerath). The cows and their calves were randomly allocated into two treatments: permanent suckling (PS) - cow and calf remained together all the day and; restricted suckling (RS) - they remained together during only 7 hours per day. For the RS group, during the first ten days of the breeding season, the time taken to apart the dyad (TA) was recorded, and was performed a 30 min. behavioral observation, recording the suckling frequency (SF). The thoracic girth was used as indicator of calves' development, being measured at the beginning (time 0) and final of breeding season (90 days) The differences of time to apart and suckling frequency over the 10 days of assessment were analyzed by the Friedman test (with Bonferroni correction), followed by linear (for TA) and quadratic regression analysis (for SF). Mann-Whitney test (Z) was used to compare the means of TG between treatments. The TA decreased significantly over the 10 days of assessment ( $F = 18.36, P < 0.01$ ); the following equation was generated:  $TA = 9.39 - 0.019 \cdot \text{day}$  ( $R^2 = 0.70, P < 0.01$ ). The SF increased over time ( $F = 28.11, P < 0.01$ ); the quadratic equation generated was  $SF = -7.12 + 6.86 \cdot \text{day} - 0.37 \cdot \text{day}^2$ , ( $R^2 = 0.95$ ). There was no significant difference in TG between treatments at time 0 ( $PS = 95.72 \pm 13.03 \text{cm}$  and  $RS = 92.28 \pm 10.26 \text{cm}$ ,  $Z = -0.84, P > 0.05$ ). However, at the end of breeding season (90 days) the restricted suckling group had lower TG ( $116.30 \pm 8.75 \text{cm}$ ) than that with permanent suckling ( $122.56 \pm 6.58 \text{cm}$ ). According to our results the calves adapted to the new handling routine, probably because they learn that they will not have access to the milk until the next morning and possibly this was an important stimulus for the adaptation process. The lower development for RS group occurred probably due to the restriction of milk for 17 hours per day during 90 days. This study presents preliminary data and it is possible that after 90 days of BS, the calves of the RS group could achieve the same development presented by the calves of PS, based on the compensatory weight gain. Thus, the results of this study have practical value, since there is resistance to the adoption of a controlled feed management by the difficulty in separating the calves of their dams.

Key-words: adaptation, animal welfare, behavior, handling, performance.