

## Analysis of early weaning in the weight performance of cow-calf in the Pantanal of Mato Grosso do Sul

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In the Pantanal, cow-calf livestock is developed in extensive system. The management of weaning is an important factor to achieve efficient productivity indices, as early weaning leads to an increase in the rate of postpartum oestrus and also the cows' body condition score. In order to assess the effect of early weaning of calves (100 days old) and the supplementation of cows and calves on the body weight of primiparous and multiparous cows, an experiment was conducted during the period of procreation in 2012/2013, with three treatments (treatment1 - Trat1 - the cows were given UREADO, whereas the calves were given Via Lac ® (VL) in CREEP FEEDING since they were born; treatment2 - Trat2- the cows were given ENERGETIC and the calves received Via Lac ® ration with antimicrobial additives (VLM) in CREEP FEEDING since they were born; and treatment 3 - Trat3 – the cows were given UREADO). Each treatment involved 130 cows. The cows were weighed at the beginning of the experiment, in November 2012 (P1), January 2013 (P2) and at the weaning of calves in March 2013 (P3). The data were submitted to repeated measure analysis by using generalized mixed models with estimation of the parameters by restricted maximum likelihood (REML). The GLIMMIX procedure from the SAS program, version 9.12 (2010) was used. The fixed variables considered were the treatment - Trat, the cow category - CV (primiparous or multiparous) and the order of the weighing – OP, in addition to the interactions between Trat and OP, and CV and OP. The cow was considered a random effect. Only the Trat effect was not significant ( $P > 0.01$ ). The remaining effects, including the interactions, were significant ( $P < 0.01$ ). The weights in P1 were not different between the Trats (361.74 kg; 361.57 kg; and 362.61 kg, respectively). In P2 the average weight (371.56 kg) of the cows of Trat1 was significantly lower ( $P < 0.01$ ), when compared to the average weights of the cows of Trat2 and Trat3 (381.83 kg and 386.73 kg, respectively). In the last weighing (P3), the cows of Trat1 with the lowest average in P2 reached the average weight of 403.55 kg, significantly greater than the average weight of the cows of Trat2 (386.75 kg). It was also higher than the average weight of Trat3 (395.54 kg), but the difference was not significant. The cows of Trat1 presented, in P3, the highest average weight after having presented the lowest average in P2. The effect of the use of Creep Feeding provided shortly after the birth of calves was positive on the weight of the cows in P3. The supplements offered to the cows were also beneficial to the weight performance of the cows. The averages (in kg) in P1, P2 and P3 for primiparous and multiparous cows were 353.82 and 370.12; 355.95 and 403.80; and 413.72 376.30, respectively. As expected, the weight of the multiparous cows was significantly higher in all measurements, but it is interesting to note that in P3 the primiparous cows had a higher average weight than the multiparous in P1. This may indicate that the cows reached the mature weight during the experimental assessment period, that is, the management prevented the cows from suffering the physiological wear of the first breastfeeding and weaning of calves which, in extensive systems, cause a significant increase during the first deliveries interval. The development of the experiment will enable the analysis of the aspects regarding the re-conception of cows and the economic aspects of the supplementation of cows and calves, with the objective to guide the intensification of calves production system in the Pantanal.

**Keywords:** production system, supplementation, management, beef cattle

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