

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## EFFECT OF CALVING INTERVALS ON THE WEIGHT AT WEANING OF BRAHMAN CATTLE IN COLOMBIA

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**Introduction:** For beef cattle, the calving interval (CI) is considered a trait with the ability to influence the weight at weaning (WW) of calves. It is thought that, when cows have a longer CI, it is possible to generate offspring with better weight during the next lactation period. This is due to a better recovery time after the previous weaning. **Objective:** To verify the effect that calving intervals in different calving orders have on the weight at weaning of Brahman sucklings in the Colombian low tropic. **Materials and methods:** Records from animals born between 1975 and 2006 in a farm located in the Obando municipality in Valle del Cauca, Colombia were used. These contained data on WW and CI from 1011 calvings (calvings 1 to 10). The two studied variables were associated via the Pearson correlation coefficient using the proc corr procedure (SAS version 9.2) Then, an analysis of variance was conducted in order to verify if the CI had any influence on calf WW. Additional sources of variation were added in an attempt to better model WW variations, namely: calving order (CO), calving month (CM), sex of the suckling (SS), cow age at calving (CAC), age at weaning of the sucklings during the previous calving (AWSPC), age at weaning of the sucklings (AWS) and WW during the previous calving (WWPC). A repeatability model was employed using the proc mixed procedure (SAS version 9.2) To this end, sucklings were considered as random effects and calving order as repeated measures. **Results:** The Pearson correlation coefficient between CI and WW ranged from -0.273 (CO4) to 0.309 (CO7). It was significant only in CO2 ( $p=0.0001$ ), where the lowest value for WW was found. However, this was also true for CO6 ( $p=0.0204$ ) and OP7 ( $p=0.0228$ ), where WW values were higher. The statistically significant variables were: SS ( $p<0.0001$ ), CI ( $p=0.0410$ ), AWS ( $p<0.0001$ ), AWSPC ( $p=0.0073$ ) and WWPC ( $p<0.0001$ ). CI was an important source of variation on WW, which suggests that the previously mentioned correlation results may be biased by the fact that the WW included in that estimate contains all those sources of variation, thus hindering quantification of the effects of CI on WW. **Conclusion:** CI proved to have a real effect on the WW of the calves. Therefore, higher WW values are expected from the Brahman cows in the studied farm if an adequate sanitary and nutritional management is provided during the cows' resting period.

**Keywords:** analysis of variance, reproductive parameters, low tropic.

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