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## Assisted calving: association with uterine diseases and reproductive efficiency in crossbred dairy cows

Luís Fernando Faria Courya <sup>1</sup>, Carla Cristian Campos <sup>2</sup>, Giovanna Clara Marques dos Santos <sup>2</sup>, Giovanna Faria de Moraes <sup>2</sup>, Ricarda Maria dos Santos <sup>2</sup>

<sup>1</sup> APOIAR - Grupo Apoiar (Patos de Minas, Minas Gerais, Brazil), <sup>2</sup> UFU - Universidade Federal de Uberlandia (Uberlândia, MG, Brazil)

## Resumo

Occasional assistance during calving is important to ensure cow and calf survival. Early intervention has the potential to prevent stillbirths, while unnecessary or premature intervention can also cause injuries in the birth canal due to the lack of proper soft tissue dilation. Although the prevalence of dystocia may appear to be low (between 4.1 and 13.7%), calving assistance rates are high, varying between 10 and more than 50%. Thus, the aim was to evaluate in crossbred lactating dairy cows that had single living calve, the effect of type of calving (normal or assisted) on uterine disease occurrence, and on number of artificial inseminations (AI) per conception and pregnancy rate at 150 days postpartum (DPP). Cows were monitored during calving and the type of calving was classified as normal or assisted. Normal calving needed no interference by humans while assisted calving needed human intervention, such as a calf puller. A total of 825 calvings were recorded, of which 7 were stillbirths (0.85%) and 17 were twins (2.06%), and 801 (97.09%) calvings of a single and live calf were analyzed. The uterine diseases evaluated were retention of the fetal membranes (RFM), metritis, and clinical endometritis (CE). RFM was considered when the cow did not eliminate the fetal membranes within the first 12 hours after calving. Metritis was characterized by an enlarged uterus and a watery red-brown fluid to viscous off-white purulent uterine discharge, which often has a fetid odor. CE was defined by the presence of purulent vaginal discharge containing more than 50% pus, as analyzed by Metricheck®, an involuted uterus at transrectal palpation and no clinical systemic signs diagnosed between 21 and 35 DPP. A total of 801 calving of a single and live calf were analyzed during the study period, of which 766 (95.63%) were normal and 35 (4.36%) were assisted. Most of the cows with normal calving had a healthy postpartum period (73.89%), while most of the cows with assisted calving had uterine diseases (74.29%). The number of Al per conception was similar in cows that had normal or assisted calving  $(2.39\pm0.08 \text{ and } 3.00\pm0.43, P = 0.16)$ . There was no evidence of a negative influence of type of calving on the pregnancy rate at 150 DPP of crossbred lactating dairy cows (P = 0.44). Healthy cows had a higher pregnancy rate at 150 DPP than cows affected by uterine diseases in the postpartum period (51.65 vs. 42.92%). In conclusion, the majority of crossbred lactating dairy cows with normal calving had a healthy postpartum period while most of the cows that had assisted calving had uterine diseases, and healthy cows had a higher pregnancy rate at 150 DPP. Crossbred lactating dairy cows that had normal or assisted calving had similar number of Al per conception, and the negative influence of type of calving on the pregnancy rate at 150 DPP was not detected.