



The effect of metritis on the feeding and drinking intakes and behavior of Holstein cows

Fernanda S. Machado*¹, Marcos Wilson Vargas², Bruno C. Carvalho¹, Gustavo B. Santos³, Mizeck Chagunda⁴, Marcelo N. Ribas⁵, Mariana M. Campos¹, Maria de Fátima A. Pires¹

¹Embrapa Gado de Leite, Juiz de Fora, MG, BRA; ²Universidade José do Rosário Vellano, Alfenas, MG, BRA; ³Universidade Federal Fluminense, Niterói, RJ, BRA; ⁴Scottish Agricultural College, Dumfries, UK; Intergado Tecnologia, Bolsista RHAECNPq, Contagem, MG, BRA

* fernanda.machado@embrapa.br

Puerperal metritis reduces long-term milk yield and feed intake, impairs reproductive performance and increases the chance of culling. Several studies have showed recently that feeding behavior measures using radiofrequency technology are useful to identify health problems in dairy cattle. The study was conducted at the research farm of Embrapa Dairy Cattle. Eighteen multiparous (parity = 3,2 ± 1,3, mean ± SD) Holstein lactating cows were observed from calving to 79 days in milk. After calving cows were housed in a sand-bedded free stall equipped with twelve electronic feed bins and two electronic water stations with live weight measurement platform (Intergado, Seva Engenharia Ltda., Contagem, Minas Gerais, BRA), that were used to monitor individual feeding and drinking behavior and intake as well as live weight. Cows were fed TMR consisting of 50% corn silage and 50% concentrate on a DM basis. Animals were fed daily at 06:00 and 15:30 h and were milked at 06:00 and 15:30 h. Orts were removed from the bins each morning before fresh feed delivery. Samples of TMR were collected twice a week and pooled into weekly composite samples. Dairy milk yields were recorded daily for each cow until 79 days in milk. The body condition score (BCS) of each cow was evaluated weekly by a trained person. The live weights of cows were registered each time the animal visited the water bin. Metritis was diagnosed weekly using vaginal discharge evaluation, after calving until 60 days in milk. Rectal temperature was taken daily at approximately 09:00 h from d 1 to d 15 postcalving using a thermometer. Analysis of variance was done using the general linear model (GLM) procedure of SAS. The statistic model used had metritis, days in milk and fever as fixed effects; and cowed, milk yield, average body weight, and body temperature as random effects. Cows that had metritis spent more time at the water station (42 min/d *versus* 18 min/day; P<0.001) but drunk less water than those cows without metritis (73.42 *versus* 80.02 L; P<0.01). The electronic monitoring system records the time that cow spends at the water station, not the time that the cow is actually consuming water. It is possible that the live weight measurement platform with a stanchion, linked to the water bin, represent a secluded area for the metritic cows, since recent studies have showed that dairy cows seek isolation when ill. Cows with metritis spent more time at the feed bin (209 min/d *versus* 192 min/d; P<0.001) but presented lower feed intake (as fed-basis) than healthy cows (P<0.05). There was no difference in the number of times that animals visited the feed bins. There was no significant difference in milk yield. Cows with metritis had 22 kg lower body weight than healthy ones (P<0.01), however metritis cows were 0.3 points higher in terms of body condition score (P<0.05). In conclusion, further studies are needed to understand the link between behavior and metritis occurrence, which will be helpful in improving the ability to early disease detection.

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P. 217