INGESTIVE BEHAVIOUR OF HOLSTEIN COWS GRAZING FESCUE IN SPRING: DISPLACEMENT PATTERNS AND FEED STATION USE

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Animal behavior is an indication of the relationship between their internal state and the environment and can be used to establish management strategies to improve nutrient intake and animal performance. In this context, it is essential to understand the grazing process and how it is influenced by sward characteristic. The objective of this study was to evaluate the effect of three defoliation intensities on a Fescue (Festuca arundinacea) based pasture on the animal’s displacement pattern and feeding station (FS) use. The treatments were Lax, Medium and Control, whose sward height were, respectively, 15, 12 and 9 cm after grazing. The work was carried out at the University of Republic, Uruguay, in the spring of 2017. For all the treatments the criteria to start grazing was when the pasture reached the three leaf physiologic state and/or 18 – 20 cm height. Thirty six Holstein mid lactation dairy cows with body weight (BW) 618 ± 48 kg and body condition score (BCS) 2.8 ± 0.2 (1-5 scale) were blocked according to calving date, BW, BCS, number of lactations and previous milk production in completely randomized blocks with four spatial repetitions. The pasture for grazing was accessed from 08:00 to 14:00h and 17:00 to 03:00h. The cows were milked twice a day (at 04:00 and 15:00h) and were evaluated through grazing tests at least 60 min in each grazing turn (am and pm) to determine the number of FS used and the number of searching steps on both moments, start and finishing of the grazing period. The data were analyzed using the PROC MIXED procedure of the SAS System. There was no effect of the treatments on any of the variables studied (P>0.05), having significance for turn and moment (P<0.05). The number of FS per minute was higher at the beginning than at the end of the grazing period (4.6 vs. 4.3, P = 0.0146), and the time at each FS was higher at the end (13.4 vs.14.7, P = 0.0157). The cows used a greater number of FS per minute (P<0.0001) in the evening grazing than in the morning one (4.7 vs. 4.2), remaining less time (P = 0.0004) in each FS in the evening (13.4 vs. 14.7 seconds). The depletion of biomass between start and finishing of the grazing period changed the grazing strategies of the cows, and as well as the time of the day, having influence on FS exploration.

Keywords: dairy cow, defoliation intensity, pasture management, sward height.