The study of ingestive behavior is a highly important tool in the evaluation of diets, because through it is possible to acquire knowledge of the possible relationships existing between foods and animal, allowing us to adjust the feeding management of animals to obtain better productive performance. The objective of this study was to determine the effect of the concentrate supplementation with different protein levels (9, 15 and 21%) on the feeding behavior of lactating cows in Mombasa grazing under intermittent grazing. Twelve lactating crossbred multiparous cows were used, distributed in randomized blocks design, considering milk production (13.9 ± 2.3 kg day⁻¹) and dry matter intake as the criterion for grouping. The cows were kept in a pasture of Mombaça grass (Panicum maximum, cv. Mombaça), irrigated and fertilized, with free access to water under the intermittent grazing method, with one day of occupation and 16 days of rest. Supplementation was offered during morning and afternoon milking, in the ratio of one kg of concentrate to every three kg of milk. Three behavioral analyzes of 24 hours each were made, beginning at 07:00 a.m., totaling 72 hours, by means of visual observation by the method of instantaneous sweep, in intervals of ten minutes. Observations were idle, feeding and ruminating. The number of times the animals defecated, urinated and drank water were also observed. The data were analyzed using the MIXED procedure of the SAS. Orthogonal polynomials for treatment responses were determined by linear and quadratic responses (5% of significance). The feeding, rumination, idle and total chewing times were not altered (P≥0.05) when cows were fed with concentrates containing different levels of crude protein, the means found were 491.38; 383.05; 565.55 and 874.44 min day⁻¹, respectively. Feed peaks were observed from 7:00 a.m. to 9:00 p.m. and 1:00 p.m. to 3:00 p.m., which corresponded to the milking time where cows received protein supplementation. From 9:00 am to 1:00 p.m., cows decreased feeding time and increased time in rumination. From 5:00 p.m. to midnight the animals spent more time on feeding. From 00:00 to 05:00 hours the cows had a peak of rumination, followed by the idle. It was concluded that the different levels of protein in the concentrate did not influence the feeding behavior pattern of lactating cows in Mombaça grass pasture.

**Keywords:** feeding peaks, idle, intermittent part, rumination