

Vocalization behavior of goats (*Capra hircus*) in relation to two routine management practices: feeding and milking

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Animals communicate through vocalization reflecting physiological, environmental and status of their welfare. The objective of the study was to determine the changes of vocal behavior (VB) of Jamunapari cross bred goats in relation to two management practices; feeding and milking. The intensity of sound and the associated VB were observed using a mobile application and an ethogram respectively. Sounds of goat kids (<3 months, n=5), females (1-2 years, n=5) and males (1-2 years, n=8) were measured by adopting Randomize Complete Block Design while they were in the same usual herd. All the individuals in different categories were in the same physiological status. Treatments were feeding (T1) and milking (T2). Data either before or after feeding (T1) and milking (T2) were taken nine times (replicating the time) a day hourly. General behaviors in relation to vocalization were observed under in-house condition. Data were analyzed using SPSS version 22. Intensity of calls of males was significantly ($p < 0.05$) higher among male animals (60.81dB) compared to females (36.75 dB) and kids (54.31 dB). Mouth opening (MO) while moving was the most prominent behavior in vocalization. Full and partial MOs while either walking or running were associated with vocalization. Significant differences showed between MO and vocalization before and after feeding ($P < 0.05$). More full-MO (55.55%) than partial MO (44.45%) were shown before feeding. In contrast, after feeding partial MO (75%) dominated over full MO (25%). Situation of milking was not affected the VB ($P = 0.383$). However, VB before milking was comparatively higher (40%) than after milking (35%). It can be concluded that VB of goats is changed in relation to feeding, but not to milking.

Keywords: feeding and milking, goats (*capra hircus*), management practices and vocal behavior

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