

## **Assessment of vocalization behavior of dairy cows in relation to feeding practice as a measure of welfare**

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Vocalization of cattle delivers useful information about the caller that can be used to improve management practices and their welfare. Vocal behavior (VB) of cattle gives useful information of their physiological and psychological functioning. The objective of the study was to identify the changes of VB in relation to feeding as a measure of welfare of Jersey x local cross bred dairy cattle. Common behaviors associated with vocalization was observed using an ethogram while intensity of sounds were measured by using a mobile application; a sound meter. Randomized complete block design (RCBD) was used and blocking was done against the parity of milking cows (1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> parity) between aged 4-5 years. Sample size was (n=12). Two treatments were used; before feeding (T1) and after feeding (T2). Behavior study was done by getting direct observations continuously 2 hours/day for 3 months' period either before or after feeding while maintaining the animals in usual herds and in house situation. Same animal group was subjected to the study. Statistical package, SPSS with Mc-Nemar's paired test was used for data analysis. There was a significant difference ( $P < 0.05$ ) between vocalization and feeding time. In relation to feeding, milking cows show a greater number of vocalization in T1 with high average duration (2.9s) compared to T2 (1.5s). Behaviors like interaction with other animals, mouth opening, lying/standing position and urination was significantly ( $p < 0.05$ ) affected by T1 and T2. Position and urination showed a significant difference ( $P < 0.05$ ) in T2 compared to T1. It is concluded that changed VB of milking cows can be expected either before or after feeding practice as an indication of welfare.

**Keywords:** behavior, dairy cattle, feeding, vocalization and welfare

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