

## **Defecation Behavior and Fecal Consistency of Friesian Dairy Cows Affected by Feeding Time Associated with Milking**

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### **Abstract**

Ration composition, time of feeding and health status of dairy animals directly affect their fecal consistency (FC) and defecation behavior (DB). The objective of the study was to evaluate the effect of time of feeding [before milking (BM) vs. after milking (AM)] on the FC and DB of Friesian dairy cows fed the same ration (DM= 28.9%, CF=25.29%, CP=15.66%, N=2.5 %) on the FC and DB of Friesian dairy cows. Experimental design was a complete randomized design with ten replicates. Treatments were feeding before milking (T1) and feeding after milking (T2). Data were collected from 10 milking cows from each treatment (n=20) for 4 months. Behavior at defecation was recorded continuously for 45 seconds. In relation to feeding (FE), DB was observed continuously for 2 hrs. either before or after milking by following scan sampling method. Behavioral bouts observed were Feeding (FE), fecal discharge (FD), urination (UR), arching (AR), straining (ST) and raising tail (RT). Boot test was performed to assess the FC and scores were fixed at; 1- Diarrhea condition, 2- High watery condition, 3- Custard-like and structures recognized, 4- More thick custard like 5- Stiff feces. Significant difference ( $P<0.05$ ) was observed in FE and FD. However, UR and AR behaviors were not significantly different ( $P>0.05$ ). Frequency (%) FE was comparatively higher ( $4.0\pm 0$ ) BM over AM ( $1.2\pm 0$ ) in T1. It was ( $2.8\pm 0$ ) AM in T2. Simultaneously, FD was significantly ( $p<0.05$ ) higher BM ( $0.70\pm 0$ ) in T1 compared to T2 ( $0.40\pm 0$ ). No significant difference ( $P>0.05$ ) was observed for UR and AR (cooperate behaviors) between T1 and T2. However, UR was higher before milking compared to after milking in both treatments. Positive correlations were recorded between FC and straining time ( $r^2 = 0.667$ ) and also between FC and FD ( $r^2 = 0.819$ ). Though time of feeding had not affected on milk yield, it showed a significant ( $p<0.05$ ) influence on FD and FC. Score 2 fecal score was recorded in T2 indicating high watery feces associated with increased stress whereas score 3 was recorded by T1 treated milking cows showing normal feces. It is concluded that feeding should be practiced before milking to ensure the welfare of dairy cows.

**Keywords:** Defecation behavior, Fecal consistency, Feeding time

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