Subclinical mastites induces few changes in the behaviour of dairy cows during milking

Marcelo Simão da Rosa[1,2,3], Sabrina Ramos de Carvalho[3], Vanessa Fernandes Bordon[3], Emanuel Almeida de Oliveira[3] and Mateus J.R. Paranhos da Costa[3,4]

[1] Prog. Pós-Grad. Zootecnia, Faculdade de Ciências Agrárias e Veterinárias / UNESP, Jaboticabal/SP, Brazil.
[2] Escola Agrotécnica Federal de Muzambinho, CP. 02, 37890-000, Muzambinho-MG, Brazil. rosaefreitas@uol.com.br
[3] ETCO - Grupo de Estudos e Pesquisas em Etologia e Ecologia Animal, FCAV/UNESP.
[4] Dept. Zootecnia, FCAV/ UNESP, Jaboticabal/SP, Brazil. CNPq researcher.

Mastitis is a worldwide disease which has negative effects on welfare of dairy cows and milk production. It is expected that behavioural symptoms are not always present, varying according to the mastitis intensity – from apathy and decreasing of food ingestion to undetectable behavioural evidences. This study was carried out to test the hypothesis that subclinical mastitis would be detected by changes in some behavioural aspects of dairy cows during milking. The behaviour of 97 dairy cows (3/4 to 31/32 Hostein-Zebu) were recorded during 28 milking sessions (14 days) in January 2003. The cows were kept in semi-intensive system (staying at pasture most of the time) and being milked twice a day in a milking parlour where groups of 24 cows (12 x 12 cows tied in paralel position) were milked togheter. Their behaviour was observed directly and continuously, recording the occurences of rumination, defecation and urination, besides milk yield. The diagnose of subclinical mastitis was made after all behavioural records, using the California Mastitis Test (CMT). The data was analyzed through Anova (one-way), using SPSS software package. Cows with positive CMT produced on average 1.0 kg less milk than those with negative test; but this difference was no statistically significant (Anova: $F_{1.95}$=2.827; p=0.097). A significative effect was detected only on defecation occurrences (Anova: $F_{1.94}$=5.472; p=0.021), which was more frequent among those cows with positive CMT. No statisctical effects were found on urination and rumination occurences (Anova: $F_{1.94}$=0.530; p=0.468 and $F_{1.94}$=1.902; p=0.171, respectively). These results indicate that subclinical mastitis is not easily detected through behavioural analysis, adding the fact of changes in defecation occurences could be influenced by many other factors besides mastitis.