

C-017 Effects of season and cow cleanliness on teat apex score and milk somatic cell count Luciana Bava, Anna Sandrucci, Alberto Tamburini, Maddalena Zucali Dipartimento di Scienze Animali, Università di Milano, Italy Corresponding author: luciana.bava@unimi.it Teat end tissue could change after repeated milkings, resulting in the development of a callous ring around the teat orifice. Factors affecting teat hyperkeratosis include: teat end shape, production level, stage of lactation, lactation number, milking management (especially slow milking and over-milking). Also harsh weather conditions or sudden weather changes can affect the level of teat hyperkeratosis. Somatic cells count in milk is an indicator of udder safety and is influenced by stage and number of lactation, milking procedure, hygiene condition of cubicles and udder, seasonal variations. The aim of the study was to investigate the effects of season and cow cleanliness on teat end condition and somatic cell count (SCC). A sample of 16 dairy farms (80 cows on average) were visited during winter, summer and intermediate seasons (autumn or spring) at evening milking. Hygiene score (Schreiner and Ruegg, 2003) and teat score (Mein et al., 2001) were assessed for each milking cows. Individual SCC and milk quality were obtained from AIA database. Records were Linear Score (LS) per cell count, average Udder hygiene Score (US) and average Teat Score (TS). Two classes of observations were defined on US basis:  $\leq 2$  or  $> 2$  score. All data (2161 observations) were analyzed using analysis of variance (proc GLM, SAS). LS showed very low values but with high variability ( $2.9 \pm 1.7$  on average); TS was very good ( $1.8 \pm 0.62$ ). Season had a significant effect ( $P < 0.001$ ) on milk quality (fat and protein) with higher values during winter in comparison with other season; unexpected no effect was obtained on LS. Season also affected TS with higher value during intermediate seasons. US was significantly higher ( $P < 0.05$ ) during winter in comparison with other seasons. TS were significantly lower ( $P < 0.02$ ) in the first class (based on US) compared to the second one. The study confirmed the great effect of season on milk quality and teat conditions and showed that udder cleanliness had a positive consequence on teat apex condition.