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Relation between rumination time with somatic cell count, production, lactation number and reproductive status of dairy cows

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According past investigations rumination time (RT) is generally used for early detection of metabolic diseases such as hypocalcemia, displaced abomasum and ketosis (Moretti et al., 2017). It was determinate RT changes during oestrus (Reith and Hoy 2012) and no work has been published on RT changes depending from reproductive status of dairy cows. The aim of this research was to determinate relation between rumination time with somatic cell count, lactation number and reproductive status of dairy cows. We were selected 500 cows on 1-365 days in milk (DIM). According somatic cell count (SCC) cows were selected to following groups: first group (SCC>200 thousand/ml, n=155) and second group (SCC≤200, thousand/ml, n=345). According reproduction status cows were selected to following groups: Inseminated (1– 35 days after insemination (n=150)); Open (45 – 90 days after calving(n=105), Frech (1 – 44 days after calving(n=35); not pregnant (>35 – 60 days after insemination and not pregnant(n=25); Pregnant (35 – 60 days after insemination

and pregnant(n=185). According milk yield (MY) cows were selected to following groups: first group (<30kg/d), second group (≥30 kg/d). The cows are milked with Lely Astronaut® A3 milking robots. Daily milk yield, rumination time (RT), milk composition (Fat, protein, lactose, somatic cell count and gynecological status date are collected from the Lely T4C management program for analysis. Relation between RT and SCC of cows was statistically significant (P <0.01). It was found that cows with SCC higher that 200 thousand/ml, RT was lower that cows with SCC less that thousand/ml (492±3.9 min/day; and 460±11 min/day). It was found that cows with MY higher that 30 kg/d, RT was higher that cows with MY less that 30 kg/d (p<0.05), (505±4 min/day and 477±23 min/day. Analysis showed that the RT did not have a statistically significant effect on lactation number and reproductive status of dairy cows. We can conclude that the longest rumination time was determined in cows with SCC lower that 200 thousand/ml. RT statistically reliably positively correlated with productivity.

Biography

Ramunas Antanaitis has completed his PhD at the age of 27 years from Lithuanian University of Health Sciences, Veterinary Academy in 2008. He is the Professor of Lithuanian University of Health Sciences, Veterinary Academy, Large Animal Clinic He has published more than 50 papers in reputed journals and has been serving as an editorial board member of reputed.

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