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Impact of paremeters from automatic health monitoring system on cow's reproductive success

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The hypothesis of this study was that some biomarkers of an automated health monitoring system can be as indicators of cows reproduction success. On day of oestrus the pH, temperature (C°) of the contents of cow reticulorumens and cow activity were measured using specific smaX-tec boluses (smaX-tec, Austria) manufactured for animal care. Rumination time, milk content (lactose (%), protein (%), fat (%), fat-protein ratio, milk yield (kg/d) were registered with the help of Lely Astronaut® A3 (Lely, The Netherlands, 2009) milking robots. The pregnancy was examined by ultrasound after 30–35 d after insemination. The pregnant cows were assigned to the PG + group (n = 36) and not pregnant, were assignet to the PG- group (n = 32). We estimated that the reticulorumen pH (5.64%, $P < 0.001$) and reticulorumen temperature (0.34%, $P < 0.01$) and productivity (MY) (1.94%, $P < 0.001$) were higher in PG+ cows compared to PG− cows. In PG+ group was estimated a higher milk fat ant protein ratio compared to PG− group (7.77%, $P < 0.001$) and a higher content of milk lactose (0.06%, $P < 0.001$). Cows of PG + group were more active compared to the PG− group ($P < 0.001$) and consumed less concentrates ($P < 0.001$). According our results we can conclude that higher reticulorumen pH,temperature, milk lactose, cows activity and lower consumption of concentrates were associated with the reproduction success. The key reliable indicators of cow reproduction success are changes in productivity and activity.

Biography

His is a PhD student at the Lithuanian University of Health Sciences, 9 years works as a veterinarian and assistant at the Clinic of Large Animals of the Veterinary Academy. During his PhD period, he has published more than 16 papers in reputed journals. The results of the research have been published in more than 10 international scientific conferences.