THE CORRELATION BETWEEN COWS UDDERS MORPHOLOGY AND MILKING CHARACTERISTICS

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Summary. The purpose of this study was to evaluate cows udders' morphological index and correlation between cow's milking characteristic and the number of somatic cells in the milk. Morphological index of udder of 99 cows milked using quarter udder mashinery YPB-1 was evaluated. It was estimated that 92 % of Black and White cows had udders of required bath and pelvic forms. These cows produced on 2.72-3.01 kg higher amount of milk compared to the the cows which had a round form udders ($p<0.05$). The lowest number of somatic cells (362 thousand/ml) had the cows with bath form udders ($p<0.1$). It was estimated that cows with goats or round shape udders had on 1.7-3 minutes longer milking time compared to the remaining cows ($p<0.1$). The milking speed increased on 0.33-0.78 kg/min in cows with desirable udder shape($p<0.05$) . In addition, the milk yield in the front quarters was 5.2 kg and in the rear quarters 8.4 kg ($p<0.05$). The average index of investigated cows was 44.6 %. These results demonstrate that positive significant correlation was observed between milk yield and udder index ($r=0.30$; $p<0.01$), udder ligament ($r=0.34$; $p<0.01$) and milking speed ($r=0.52$; $p<0.01$). Further, positive significant correlations were observed between distance of front (0.333; $p<0.01$) and rear teats (0.245; $p<0.05$) and the amount of somatic cells in the milk.

Key words: cows, udder morphological index, milking speed, udder quarter, somatic cells.