THE EFFECT OF MILK EJECTION OCCURRENCE BEFORE OR DURING MACHINE MILKING ON MILKABILITY AND MILK COMPOSITION OF EWES

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Abstract. The objective of this study was to evaluate the effect of milk ejection reflex occurrence before the cluster attachment on teats on milkability parameters and milk composition of ewes. Milk flow data were recorded from 24 ewes of the Tsigaj (TS, n = 12) and Improved Valachian (IV, n = 12) on their 80±15 DIM. The experiment was performed during three successive evening milkings. Ewes were divided into a two groups. During the first milking the first group (6 TS, 6 IV) was treated by 5 IU *i.m.* of oxytocin and the second group by physiological saline 60 seconds before the cluster attachment. The application of oxytocin (OT) and saline (SA) in both groups was changed in cross over design on the third evening milking. Milk flow kinetics was recorded individually using four electronic jars collecting the milk during milking. Milk samples for composition analysis were taken after milking of ewe. There were no differences between two treatments when total milk, machine milk and stripped milk yield were compared though not significantly the data were higher at OT. OT significantly increased maximal milk flow rate (OT vs. SA: 0.930 vs. 0.628 $l.min^{-1}$) ($p<0.001$), milk yield in the thirty (OT vs. SA: 0.117 vs. 0.072 l) ($p<0.001$) and sixty second of milking (OT vs. SA: 0.136 vs. 0.106 l) ($p<0.05$) and reduced milking time from 50.63 s to 31.54 s ($p<0.01$). Statistically significant difference ($p<0.05$) was also observed at a higher fat content (OT vs. SA: 8.977 vs. 8.484 %). In conclusion, the milk ejection reflex occurrence before milking has a high impact on the milkability and the fat content in milk.

Keywords: ewes, milk flow, oxytocin.