

ABSTRACT

M.Sc. Thesis

A RESEARCH ON MILK PRODUCTION AND MILK QUALITY TRAITS OF RED HOLSTEIN

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In this study, lactation length, lactation milk yield, persistency, milk quality traits and the factors affecting these traits of Red Holstein reared at a private dairy cattle farm located in Davutlar town of Aydın Province were investigated. The averages of lactation length (LL), lactation milk yield (LMY) and 305-d milk yield (305-dMY) were 353.00 ± 3.733 d, $8,484.49 \pm 109.280$ kg, $7,652.83 \pm 80.677$ kg, respectively. The persistency averages for $P_{2:1}$, $P_{3:1}$, $P_{3:2}$ and $P_{T_{max}}$ were $86.9 \pm 0.768\%$, $62.10 \pm 1.117\%$, $70.70 \pm 1.013\%$ and 5.10 ± 0.050 , respectively. On the other hand, the averages of protein, lactose, non-fat dry matter and Log_{10} somatic cell count were $3.20 \pm 0.020\%$, $4.73 \pm 0.024\%$, $8.94 \pm 0.036\%$ and 4.8045 ± 0.06946 (63,753) cells/ml, respectively. Additionally, heritabilities of milk traits for LL, LMY, 305-dMY, $P_{2:1}$, $P_{3:1}$, $P_{3:2}$ and $P_{T_{max}}$ were estimated to be 0.141 ± 0.083 , 0.466 ± 0.068 , 0.440 ± 0.063 , 0.187 ± 0.067 , 0.311 ± 0.071 , 0.275 ± 0.070 and 0.227 ± 0.065 , respectively. In this research, it was concluded that Red Holstein cows reared at this farm had higher milk yield and better udder health status than Holstein-Friesian cows reared in the same region.

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Key words: 305-d milk yield, persistency, heritability, milk protein content, somatic cell count.