ABSTRACT

M.Sci. Thesis

MILK YIELD CHARACTERISTICS and β-LACTOGLOBULIN GENE POLYMORPHISM in INDIGENOUS ÇİNE ÇAPARI SHEEP

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This study was carried out to determine milk yield characteristics of indigenous Çine Çaparı sheep under conservation. The genetic polymorphism for β-Lactoglobulin (β-LGB) gene were also determined by PCR-RFLP method. Milk yield characteristics were determined for 40 ewes in one flock. β-LGB genotyping were performed for 128 animals in all conservation population that comprising three flocks.

Only A and B alleles of β-LGB gene were observed in Çine Çaparı sheep population, but none of the animals have C allele. The observed frequencies for AA, AB and BB genotypes were found as 0.078, 0.453 and 0.469, respectively. The allele frequencies were found as 0.3047 and 0.6953 for A and B alleles, respectively. The chi-sqaure analysis indicates that all the flocks except Mustafa VURAL's were in Hardy-Weinberg equilibrium. Least square means for average daily milk yield, lactation length and lactation milk yield were 0.521 kg, 159.5 day and 81.78 kg, respectively. All the milk yield characteristics investigated were not significantly ($P>0.05$) influenced ewe age and litter size. The effect of β-LGB genotypes (AA, AB, BB) were significant ($P<0.05$) on lactation length and lactation milk yield, but not have a significant effect ($P>0.05$) on average daily milk yield. As a result of the study, some suggestions were given on activities for *in situ* conservation of Çine Çaparı sheep.

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Key Words

Çine Çaparı, milk yield, β-lactoglobulin, gene polymorphism, PCR-RFLP